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AFTER THREE CENTURIES

A Typical New England Family

BY

ELLSWORTH HUNTINGTON

AND

MARTHA RAGSDALE



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PREFACE

THIS book belongs to the new science which deals with the growth and qualities of a population. It is a combination of sociology, economics, eugenics, geography, and history. It chooses a group of people and sees what changes have taken place in their numbers and quality from generation to generation during the three centuries since the United States was settled. Starting with typical New England Puritans the history of a sample family is traced from 1633 to the present. The modern representatives are also analyzed in comparison with people of other descent. Although the investigation on which the book is based began as a study of the Huntington family, it soon expanded into a more general analysis of the millions of people who claim descent from the Puritan stock of early New England. The typical quality of the people who are here analyzed is one of the main features of the book. Although these people all bear one name they are descended from two or three thousand old New England families and are typical of the entire Puritan stock. A second feature of the book is that a genuinely *random* sample of the people descended from a specific type of colonial ancestors has been examined. Equal effort has been devoted to obtaining information about all kinds of persons, no matter whether they are of world-wide eminence or criminals and paupers. A third feature is that this book attempts to study population by a new method, namely, the use of family names and the analysis of a fairly complete sample of all the people bearing

the name. This method not only confirms many ideas that are already known, but leads to some new conclusions. Some of these are by no means proved, for the body of data is small, but they suggest many interesting possibilities.

The book was originally planned by a research committee appointed by the Huntington Family Association. This plan was revised and later supervised by a Committee on Biological Genealogy appointed by the National Research Council. At first the chairman of the committee was Dr. Vernon L. Kellogg, Permanent Secretary of the National Research Council; then Dr. Clark Wissler of the American Museum of Natural History and Yale University took his place; and finally Dr. Charles B. Davenport of the Carnegie Institution's Eugenics Record Office at Cold Spring Harbor, Long Island, assumed the chairmanship when the committee became a subcommittee of his Committee on Heredity.

The arduous work of gathering and tabulating data has been in the hands of two field workers, Miss Annette Fallows, and Miss Martha Ragsdale (now Mrs. Thomas Ragland).

In writing this book two main objectives have constantly been kept in mind. The first and most important has been to present an unbiased account of the way in which a new method of studying a problem of population brings out all sorts of facts, both old and new. This has necessitated the use of a good many tables, but most of these are small and the gist of their meaning can usually be gathered from the context without reading them. The second objective has been to interest that part of the intelligent public which concerns itself with problems of sociology, history, and eugenics, and especially with the great and all-inclusive problem of the evolution of types of population. This has necessitated a good deal of interpretation of the results even though the body of data is too small to warrant much more than tenta-

tive suggestions rather than conclusions. Parts of the interpretation will probably arouse controversy, but that is desirable in order to stimulate further study. In fact the stimulation of such study is one of the primary objects of this whole book.

Throughout the book the persons of Huntington descent who supplied not only the funds but the sample of population have also been kept in mind. Some of them may be disappointed that little or nothing has been inserted for their especial benefit, but the facts that illustrate the development of the New England type can scarcely fail to be of great interest to the family which supplied them. This is especially the case since the facts present a picture very different from the fears expressed by some people when the plan was first suggested.

In conclusion, the authors wish to express deep gratitude to several groups of people. The first is the members of the National Research Council's Committee on Biological Genealogy, together with several other scientists who met with the Committee. The help of these men has been of the utmost value and importance not only in planning the work, but in keeping it steadily directed toward broad and deep purposes. The second group consists of members of the Huntington Family Association who for five years provided financial support. Some of these bear the name Huntington and some do not. The coming of the great depression in 1929, when the work was still in its early stages, made it very difficult for many members to pay their pledges, but the proportion who maintained their payments was large. It is to be hoped that this book will make them feel justified in doing so. Thirdly, the President of the Huntington Family Association, James Lincoln Huntington, and the treasurer, Robert W. Huntington, have done everything possible to

bring the work to a successful conclusion. Another person who deserves our thanks is Mrs. Jeanette C. Dixon, an assistant, who on her own initiative and in her spare time made the investigation of the ancestry of unsuccessful persons described in Chapter VI. Finally, the senior author takes it upon himself to state that when the funds of the Huntington Family Association were exhausted, the junior author loyally stood by the work and labored for nearly a year without pay. Her persistence not only indicates the interesting nature of the work but demonstrates the character of the worker.

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Chapter I

A SAMPLE OF OLD NEW ENGLAND

IN SOME ways the Puritans of early New England resemble the ancient Greeks and the Jews. All three are small groups of people with very prominent characteristics. All three lived in relatively poor physical environments, but have had a great influence upon civilization. The greater part of the Greek contribution to human progress came from a small upper class which dominated Attica. For many centuries this little group rigidly preserved its racial purity, and at the same time evolved or perfected a highly distinctive culture. When the Athenian leaders lost their biological aloofness through intermarriage with other groups and with slaves, their culture began to decay. It is equally true, however, that when a new social system grew up, the innate ability of the Greeks began to decline. Which of the two—the innate ability, or the social system—was cause and which effect it is hard to say, for each reacted upon the other.

The Jews, unlike the Greeks, have preserved their high ability for thousands of years—from Abraham and Moses down to Einstein. They, too, and especially the groups from whom the leaders have chiefly come, have been few in number compared with the great nations of the world. And they have generally been exclusive so far as intermarriage with outsiders is concerned. Most of the Bible was produced by a very small group of people who lived in the tiny little plateau of Judea and in later days sent colonies to Galilee.

During the centuries when the Bible was taking the shape which ultimately laid the foundations of Judaism, Christianity, and Mohammedanism the Jews were very strictly segregated. Their ancestors were the remnant after sore persecution and painful migration. They themselves abhorred intermarriage with Gentiles. In later days the Jews have alternately expanded and contracted in numbers and in influence. Under the sun of freedom—by which we mean purely relative freedom—they have intermarried with the people around them and taken on the surrounding culture. Under the stress of persecution they have sloughed off those of their number who were less genuinely Jewish in spirit. At the same time they have become far more segregated biologically because marriage with the Gentiles has been banned by both sides. Thus the Jews have many times repeated the Greek experience as to the intimate interplay of heredity and environment. Their environmental conditions have modified their biological composition, while biological conditions in turn have altered social culture.

The Puritan stock of early New England has been like the Greeks and Jews. Although never very numerous, it has set its mark upon the world so strongly that it has given rise to much controversy. Through their political and educational systems, and in later days their activity in industrial invention and in spreading the use of machinery, the New England Puritans have made their influence felt in all parts of the world. They have provided far more than their proportional share of American leaders in practically every line. A mere reading of any roster of eminent Americans leaves no doubt on this score. Is this the result of heredity, or environment, or of both reacting upon one another as in the case of the Greeks and Jews? Are the descendants of the old Puritans holding their own? Are they different from the aver-

age American? If they are different, are the differences due to biological inheritance, or to diversity of social advantages?

Questions like these lie at the foundation of any reasonable planning for the centuries to come. The future development of mankind—physiologically, socially, economically, politically, and morally—is no longer in the hands of nature as distinguished from man. The human race, at least in its more advanced portions, has taken over the molding of its own future, and will never give it up. Because of this the need of knowing what characteristics of ourselves and our civilization are due to biological inheritance and what to environment assumes a tenfold greater importance. Worldwide problems like nationalism and internationalism, and intimate personal problems like marriage and children, all have a very different significance according to the degree and manner in which human progress depends on man's biological inheritance on the one hand, and on his cultural environment and training on the other. Of course both factors—nature and nurture—enter deeply into almost every human problem, but how can each be allotted its due weight?

The problem of untangling the effects of heredity and environment has become so urgent that light from every possible angle is needed. This is the fundamental reason for the following study of the effect of selection and segregation in producing special types of people. The problem can be stated very simply. If people with special mental aptitudes or temperaments are selected and then segregated for several generations, will their descendants display any distinctive characteristics? If so, is it possible to decide how far these characteristics are due to environment and how far to heredity? A study of a random sample of such selection and segregation in old New England, together with a briefer study of three other selected and segregated human stocks, namely

the Maoris of New Zealand, the Parsees of India, and the Norse Icelanders, seems to show that the qualities which led to the original selection persist very strongly for centuries. It seems quite clear that although cultural inheritance is of the utmost importance, it could not have achieved the results which are now manifest unless biological inheritance had also played its part. The cultural and biological factors, to be sure, react upon one another so intimately that it is often impossible to say exactly what traits are due to each. Nevertheless, one important and hopeful conclusion stands out conspicuously. The selection of even a single generation of parents who rank distinctly above the average is likely to be followed by a pronounced improvement in the cultural level for centuries to come, provided the selection is followed by segregation, or by further selection. The segregation may be physical or social. The only essential is that the selected group be able to preserve both its biological and cultural identity.

The conclusion reached in this book is that the Puritans, Parsees, Maoris, and Icelanders, together with the Jews, Greeks, and many other less widely known cases, suffice to establish the preceding conclusion as a general law. If this is true, the law is of almost incalculable importance. It means that a relatively simple process in one generation may add enormously to the sum of human happiness in future generations. Of course the reverse is also true, for a wrong selection may work in the opposite direction, and wrong selections have undoubtedly been frequently made in the past. This, however, merely confirms the law. Thus the main conclusion of this book is that the Puritans, Maoris, Parsees, and Icelanders are outstanding illustrations of the law that many of the important advances in civilization result from the haphazard selection and segregation of groups

of people who display more than the average ability and initiative. If this can occur accidentally and as the result of a very imperfect selection, it might occur in a much more valuable form if directed by modern science according to a carefully considered plan.

The main part of this book investigates the problem of selection, segregation, and biological versus cultural inheritance by a new method. The distinctive feature of this method is the way in which it attempts to use what the statisticians call a random sample of the old Puritan stock. Such a sample is one in which the people who are investigated are chosen absolutely at random and thus represent every type in proportion to its actual occurrence. For example, if only the people mentioned in the genealogical memoirs of old New England families should be studied, they would by no means provide a random sample. No matter how carefully such books are prepared, the conspicuous and successful people and their near relatives are more fully represented than are the poor people who own no property, make no wills, and move away without leaving forwarding addresses.

In this book the method of getting a random sample representing the Puritan stock of the United States as a whole has been to attempt to run down every person bearing some name which is known to have been brought to America by the Puritans, but not to any appreciable extent by later immigrants. The details as to how this was done are described in Chapter VII. Here it is enough to describe the four steps by which the final sample was obtained.

The first step was to find a name borne by a sample of the old Puritan stock small enough to be intensively studied and yet large enough to give significant results, pure enough to be genuine, and yet truly representative. Such a sample was obtained by choosing a family which represents the near-

est available approach to pure Puritan descent. By "family" we mean all persons descended from certain specific ancestors. One of the most important features of this book is the distinction between such families of Puritan descent and certain other groups whose members all bear the same name, but are of heterogeneous descent. Having chosen a Puritan sample, the next step chronologically, although not according to the pages of this book, was to devise a means of scooping into our net all members of this family, or at least enough to give an unbiased representation of all grades from top to bottom. There have been many studies of families, but most of them have been merely genealogical memoirs, or books like "The Adams Family" which select notable leaders and omit the rank and file. This book apparently presents the first study in which an attempt has been made to run down every person bearing a specific name, and thus get a sample which is truly representative. In order that all levels of society may be fairly represented, more effort has been devoted to getting information about unsuccessful people than about the successful type.

When the sample was finally chosen and the names of enough people obtained, the third step was to get as much information about each person as possible. Some of the people thus chosen refused to coöperate because they feared that no family could stand so searching an examination as was proposed. Others failed to reply to letters, but enough replied to give a fair sample. The last step was to make a less intensive analysis of other old colonial families in order to compare them not only with the main sample, but with other groups, each of which consists of people all bearing the same name but of diverse descent. The purpose of this was to see how widely the various types differ, and how far they depart from the average of the country as a whole.

In spite of arduous efforts to discover the lowest as well as the highest in the social scale, a surprising degree of what is commonly called success is found in our sample of the descendants of the old Puritans. The word "success" is here used in the ordinary colloquial sense. It means, for example, that nearly one fifth of the adults in the sample family are college graduates; the ownership of homes is about fifty per cent greater among them than in the general population of the United States; directors of corporations are relatively three or four times as numerous as among the average people of the country; college professors and authors are eight or nine times as numerous; the business ratings according to Dun and Bradstreet are much higher than the average; criminals and persons applying for public aid are only half as numerous as among the average people of the country as a whole. These conditions and many others indicate a consistent and far-reaching difference between the descendents of the old Puritan stock and the general population. This difference persists even when the Puritan stock is compared with typical groups which are of English descent but only partially Puritan.

It happens that although people bearing various names are studied in this book, those named Huntington have been analyzed much the most carefully. Any other distinctively Puritan name might have been used equally well, provided it were borne by enough people. Now that the work is finished the authors greatly regret that other names were not studied with equal care. While the data were being collected, however, we had no idea what they were going to show, and did not foresee how valuable it would have been to use some other family. Later there were neither funds nor time for further study. We are firmly convinced, however, that hundreds of other Puritan names would have

given similar results. Such names as Lowell, Hadley, Prescott, Frothingham, Abbot, Dickinson, and a multitude of others would certainly stand quite as well as Huntington, and would undoubtedly give similar results if only those branches which are of Puritan descent could be studied. In fact the good showing made by this name and by the four similar names here used—Coolidge, Hooker, Lyman, Trumbull—is the more astonishing in view of the fact that only one of these families has even a single representative whose name is generally known to the great mass of ordinary Americans.

The choice of a sample family was more or less accidental. In 1927, at its five-year meeting in the old ancestral home at Norwich, Connecticut, the Huntington Family Association decided to gather records of a fuller and more valuable nature than those ordinarily published in Family Memoirs. The idea was to collect data from which future generations, perhaps a hundred years hence, might be able to draw conclusions that would otherwise be impossible. As a by-product it was hoped to discover something that would be of immediate interest.

In pursuit of this purpose a fund for a five-year campaign was subscribed, and Miss Annette R. Fallows, a Huntington by descent, was duly installed as Field Worker. She felt obliged to resign after a year and her place was taken by Miss Martha Ragsdale (now Mrs. Ragland), the junior author of this book. The latter is a Southerner who has no connection with the Huntingtons, and sees things from a different standpoint. The immediate direction of the work was placed in the hands of a committee of which the senior author was chairman. Realizing the need of expert advice, the committee asked the National Research Council to appoint a Committee on Biological Genealogy. Such a com-

mittee was appointed, and continued to serve until this book was finished.[1]

The original plan of campaign, as first laid down by the committee, began with a very searching questionnaire, the more difficult parts of which were intended to be filled out with the aid of the Field Worker. This soon proved much too voluminous, and was so complex that only persons of high intelligence could fill it out without a good deal of help. With such a document five years would have sufficed to make only a beginning of the allotted task, for the people to be interviewed are scattered all over the country. Accordingly a shorter questionnaire was prepared, but even this proved too difficult. So finally its place was taken by the brief questionnaire which forms part of the first letter in Appendix F.

While the questionnaire was thus simmering down to small compass, our conception of the nature of our task underwent a radical change. It became evident that here was an un-

[1] The membership of the committee has included the following persons, the last three of whom constitute the present members: Vernon L. Kellogg, Permanent Secretary of the National Research Council, Washington, D. C.; Raymond Pearl, Professor of Biology at Johns Hopkins University; Edward L. Thorndike, Professor of Educational Psychology at Columbia University; Harry H. Laughlin, Assistant Director of the Eugenics Record Office, Carnegie Institution, Cold Spring Harbor, Long Island; Clark Wissler, Curator of Anthropology at the American Museum of Natural History, New York, and Professor of Anthropology in the Institute of Human Relations at Yale University; and Ellsworth Huntington, Research Associate in Geography at Yale University. The committee devoted a number of meetings to careful consideration of plans, it received reports of the progress of the work, and made suggestions concerning them. Its present members have criticised this book and made valuable suggestions in respect to it. The committee, however, is not responsible for the opinions here expressed, but it was a great help in keeping the work objective and impersonal.

commonly good opportunity to analyze the nearest possible approach to a typical family of pure Puritan descent. For reasons that will appear later it seems that at least 90 per cent of the persons called Huntington in this country are descended from Simon Huntington, a Puritan emigrant from eastern England who died of small pox at sea in 1633, and whose widow landed at Dorchester, now part of Boston, with four young sons and a daughter. A number of other facts also made it evident that this family was a good sample of the old New England stock. In the first place, until recent years the Huntingtons have intermarried very little with anyone except families of their own kind. Secondly, they have intermarried with such a great number of old Puritan families that they now represent a composite descent from the average family of that type which came to America three centuries ago. Thirdly, the Huntington family has now grown to such size that even the ones who still keep the name are numerous enough to form a sample worth examining. Nevertheless, by limiting the investigation to those who bear the name, it might be possible to get track of so large a proportion of them that a genuine random sample would be available embracing not only the prosperous and prominent people who are easily discovered, but the poor, the ignorant, and the failures. Hence the objective of this part of the investigation finally became to find out at least a little about every person named Huntington in the whole United States. How this was done is explained in Chapter VII.

Let us consider more fully some of the reasons why the people of this name form a good sample of the old Puritan stock. The first reason is that the five thousand or so who bear the name represent toward two million persons of similar descent who are called by other names. Before the present work was undertaken it was supposed that the United States

contains about ten thousand descendants of the original Simon Huntington. Just why this idea prevailed it is hard to say—probably because someone, on the basis of the Huntington Genealogical Memoir, had hazarded a guess which had been passed on as if it were a real estimate. Ten thousand, however, is an absurdly low estimate. By means of the various methods described in Chapter VII information was finally obtained concerning at least the residence of 1601 adult men and 362 unmarried women bearing the name Huntington, but 94 of the men were deceased and were reported by their widows or daughters. According to the United States Census there are 3.65 native white persons of native parentage for every adult man aged 21 years or more. Therefore, using only the 1507 adult men who were living at the time of the reports, the number of persons bearing the name Huntington must be about 5500, plus an allowance of two or three hundred, let us say, for persons who have escaped our search. Among the 5500, however, 1033 are wives and hence not Huntingtons by descent. This leaves approximately 4630 persons who are Huntingtons by both name and descent. For reasons that will appear later it seems probable that fully 90 per cent of these, or about 4150, are descended from the four Huntington boys who landed at Boston in 1633.

The mere statement that 4150 people bear this name and are descended from the original Puritan family does not sound as though persons of this descent were very numerous. A little calculation, however, shows that the entire number of such persons would be approximately 2,100,000 if there had been no marriages of cousins. Although marriages of first cousins are rare, those of second, third, and more remote cousins are fairly frequent. Each such marriage reduces the number of descendants from any given ancestor. In spite

of this, however, there must be at least a million and a half descendants of the four brothers who landed fatherless in Boston three centuries ago.

This seems so incredible that it may be well to see how it is calculated. For convenience let us assume that in each family for many generations two boys and two girls grow to maturity and in turn have two similar sons and daughters. Any other number of children would give the same result, for we are merely trying to find what percentage of any future generation would retain the original name. If we start with John Smith, his two sons would remain Smiths all their lives, but the two daughters would lose the name. Since each of these four would in turn have four children, there would be 16 grandchildren, but only four would be boys who would remain Smiths all their lives. These four Smiths would have eight sons who would still be named Smith when they grew up, but their eight daughters would lose the name, and the 48 children of their cousins who were not called Smith would never have it. So only eight out of 64, or one in eight among the great-grand-children would be Smiths, provided, of course, there were no intermarriage with other families of the same name. Since approximately nine generations have elapsed since 1633, the total number of persons descended from the original Simon Huntington must be about 512 times as great as the number who retain the original family name. This number multiplied by 4150 gives 2,124,800. Nothing short of the Census Bureau could investigate such a huge number of people, but even that wonderful organization could not find out which of the 125,000,000 Americans comprise the two million who are of Huntington descent. A few thousand whose parents or grandparents have recently lost the name know of their descent from this family, and so do a few thousand especially

well informed persons whose ancestors lost it earlier. Such persons are far from being a fair sample of all who are of similar descent.

Under such circumstances the only way to be sure of getting a fair sample of the descendants of any old colonial stock is to get track of all who bear the name. There is little reason to think that those who have kept the name are different from those who have lost it. In the long run brothers and sisters marry the same types of people. Either a man or a woman may marry above or below the station of the parents, but it is obviously impossible for all girls to marry one way and all boys the other, nor can there be any appreciable difference in the two sexes in this respect when large numbers of people are concerned. It is possible that the mere fact of having a relatively unusual name which has a good reputation may make people tend to live up to it. But we doubt whether the possession of a supposedly aristocratic name like Lowell or Hadley has any appreciable effect when compared with a more common name like Thompson or Williams. It is the character and ideals of the individual family which count. A person named Jones may take as much pride in his good name as does one named Roosevelt. Hence there seems to be little doubt that the five thousand people who bear the name Huntington are a purely random sample of the million and a half or more who are of Huntington descent.

But how do we know what percentage of these people are descended from the Puritan boys who landed in Boston three centuries ago? The answer is merely that those who give any information about this are mainly descendants of the original brothers. Moreover, our own investigations show that a great many who do not know about their ancestry, and not a few who say that they are not descended from

the Connecticut Huntingtons, are really of such descent. They spring from branches of the family which went away from Connecticut long ago and settled in Vermont, New York, Maine, and Canada. Some came from a Massachusetts line, derived apparently from the oldest brother, who appears to have stayed in that state when the rest of the family went to Connecticut. Unfortunately many people failed to state their ancestry in replying to the questionnaire. Doubtless this is largely due to ignorance. Nevertheless more information might have been gained if the questionnaire had not made the mistake of asking whether people were descended from the "Connecticut" Huntingtons. Be that as it may, 92½ per cent of the 578 adults for whom definite data are available are almost certainly of old colonial descent. This is only a third of the total number, but if unreported near relatives of these are included, another third is probably accounted for. Among the remainder we see no reason for supposing that the percentage is different, unless those of Puritan descent were a little more likely to be interested in the questionnaire than were the others. Even so, however, we are convinced that those who are descended from the old New England stock amount to at least 90 per cent of those who bear the Huntington name. Thus in this respect also the sample seems to be about as truly representative as any that could be chosen.

The extent to which our sample is representative of the entire body of early Puritans can easily be estimated. If we ignore the marriages of cousins, each modern member of the sample family must somewhere have had approximately a thousand ancestors belonging to the original Simon's generation, and five hundred belonging to the generation of the four sons who were left to his wife, Margaret Baret. The records show that most of these ancestors were New England

Puritans, although in recent generations other types of ancestry have come in extensively. Except for brothers, sisters, and double cousins, no two persons have the same ancestry. Some people who are named Huntington probably have no common American ancestors except the original Simon and his wife. Hence the ancestors of the four or five thousand modern Huntingtons must include a good share of the four thousand families, more or less, among the original Puritan colonists. In other words, these ancestors must present a fairly good cross section of the 18,000 Puritans who settled in southern New England.

The small part played by any single remote ancestor in determining the quality of the people of today is not always appreciated. According to the old theory each ancestor contributes equally to the descendants in any given generation. Even so, any one original Puritan ancestor can contribute only one part in 512 to the people today who belong to the ninth generation counting the sons of Simon as the first, or one part in 1024 to those of the tenth generation. Dr. H. H. Laughlin[2] has shown, however, that a considerable percentage of the remote descendants of any given person inherit nothing whatever from him. This is because the reproductive cells of the human being contain only 24 pairs of chromosomes, or carriers of inheritance, one pair being the sex determiners. If physiologists are right in their present interpretation of the behavior of the chromosomes, it is entirely possible that after a few generations a descendant of a given ancestor will have no chromosomes whatever derived from that ancestor. In other words, you may derive none of your characteristics, either physical or mental, from your great-great-great-grandfather. In the tenth generation from a given ancestor a considerable percentage of persons is almost

[2] Genetics: Vol. 5, pp. 435-458, 1920.

certain to have no inheritance from that ancestor. If the descent is traced invariably through the male line, however, as is the case among the people named Huntington, this is not true. The chromosome which determines that a person shall be of the male sex can come only from his father; the mother has a different kind of chromosome. If the entire sex determiner is passed on from father to son, every male to whom the name Huntington has descended from the original Simon would owe at least one of his forty-eight chromosomes to that remote ancestor. It is possible, however, that the sex chromosome, as well as the others, divides in the process of uniting with the female chromosome so that only part is passed on from father to son.

Thus among the Huntington men whom we are here using as a sample it seems certain that if they are descended from the original Simon they derive at least one or two per cent of their inheritance from him. The rest, however, may be derived from any one of thousands of ancestors, as may the entire inheritance of any woman named Huntington, or of any man who is of Huntington descent, but traces part of the descent through a woman. Obviously, then, the chief thing which gives this family unity is not its descent from any one ancestor, but the fact that it is thoroughly representative of several thousand early New England families of the Puritan type. Otherwise it is by no means homogeneous, for it cuts across all levels of society from the humble laborer, and even the criminal, to the millionaire and the famous clergyman.

The high degree to which our sample represents the old Puritan stock of New England is also evident in other ways. For example, even during the first century in America the 42 men who passed the name onward to future generations, and whose records are known, had married women bearing

exactly the same number of names. Some of the men, to be sure, were married twice, but in some cases two women had the same name. For instance, two men married girls of their own name, one being a first cousin once removed and the other a second cousin once removed. This gives some idea of the number of cousin marriages in the earliest days when they were especially likely to occur. The Lathrop girls were so popular that the young Huntingtons of those early days married four of them; another young man married a descendant of Elder Brewster of Plymouth.

The records indicate that almost without exception the families into which the Huntingtons married were Puritans. This continued to be true until well after 1800, for up to that time practically all of our sample family still lived in New England, or in sections of New York and eastern Canada which had been settled by New Englanders of Puritan descent. The census of 1790 shows that out of the 121 heads of families named Huntington 108 lived in New England, 7 in New York, 4 in Maryland, and only 2 in North Carolina. At that time, according to the census volume entitled *A Century of Population Growth* 95 per cent of the people of New England were of English descent, 3 or 4 per cent Scotch, scarcely one per cent Irish, and less than one per cent anything else. The situation then was essentially the same as that described by James Savage, in the preface of his famous book called *A Genealogical Dictionary of the First Settlers of New England.* He says that in 1775 seven eighths of the New Englanders were descendants of Puritan ancestors who came before 1642, while 98 per cent were of pure English descent, not even including Welsh or Scotch. His final conclusion, couched in the language of 1860 or earlier, is that "a more homogeneous stock cannot be seen, I think, in any so extensive region, at any time, since that when the ark of Noah discharged its passengers on Mount Ararat."

A little later, in the decade from 1801 to 1810, the records in the Huntington Genealogical Memoir show only one child of this name born outside New England, New York, and Eastern Canada, while 75 per cent were born in New England.

How strong the English and Puritan element still is in the ancestry of our sample family may be judged from the names in the index of the Huntington Genealogical Memoir published in 1915. There the name Clark, or Clarke, for example, is represented by 162 persons. These include the spouses of twenty men and twelve women named Huntington, together with those of eight other persons who were of the same descent although they had lost the name. The remaining 122 belong mainly to descendants of Huntington women who married Clarks. Many times as large a number of persons in our sample family have some Clark ancestry. Other old English names with which comparisons will frequently be made in later chapters appear in the index of the Genealogical Memoir anywhere from eight times in the case of Trumbull up to 109 in the case of Brown. Contrast the frequency of these old English names with the infrequency of certain other names which will also be used for comparison. Flood, Cohen, Levine, and Russo do not occur at all, while O'Brien and Van Dyke each occur once and Larsen three times. Bear in mind that this includes marriages down to 1915.

Another way of looking at the matter is to analyze the 2635 family names in the Memoir according to their apparent origin. This shows that close to 90 per cent are English or Scotch, five per cent German, only one and a half per cent either Irish or French, a half of one per cent Scandinavian, and the remaining two per cent doubtful. Even this, however, does not indicate the full preponderance of English

ancestry. Many of the non-English names are represented by only a single entry and few by more than three or four. The English names, on the contrary, and especially the old Puritan ones, are often represented by many more, as in the following sample: Brewster 20, Dana 9, Goodwin 22, Gregory 15, Hotchkiss 16, Hooker 28, Lathrop 69, Lincoln 15, Loomis 10, Pearson 15, Seymour 15, Strong 25, Wolcott 34. All these facts indicate that up to the present century this family remained at least 95 and perhaps 98 per cent of British ancestry, and most of this was Puritan. Two centuries of almost purely Puritan descent, with practically nothing from outside, must have gone far toward producing a genuine racial stock, that is, a group of fairly homogeneous people with a common ancestry and common traits distinctly different from those of similar groups elsewhere. This is the stock in which those bearing the name Huntington appear to be a random sample. The migrations and freer intermarriage of the last two or three generations have doubtless altered this considerably. It must, nevertheless, be remembered that almost until the present century the old New Englanders still married largely among themselves, even when they went far afield.

Before we can accept the data from the questionnaires as truly representative of the old Puritan stock of New England one more question must be answered. How far do the members of the sample family for whom we have data agree in quality with those as to whom nothing is known except the residence? The best answer is to compare the occupations of the 694 men known from questionnaires with those of the 287 known only from city and county directories. Since farmers are rarely included in directories, they may be omitted. On this basis the professional men form 22 per cent of those known from questionnaires and not quite 15 per cent

of the directory group. On the other hand, business men of all kinds, including clerks, form almost the same percentage in both groups, namely 43 in the questionnaire group and 40 in the other. The same is true of skilled laborers who comprise respectively 27 and 26 per cent. Unskilled laborers, on the contrary, form only 8 per cent of the questionnaire group against 20 per cent of the directory group.

The differences between the two groups in respect to professional men and laborers are probably not so important as appears at first sight. They are partly due to peoples' tendency to put the best foot forward. For example, one man who is recorded in the directory as a laborer, calls himself a "vocalist" in his questionnaire and would have been classified as professional if the directory had not given a check on him. A good many people who recorded themselves in the questionnaires as engineers, or as engaged in "engineering," would not be rated as professional men by a census taker who knew local conditions. When it comes to unskilled labor there is the same difficulty as in the professions. The directories say "millhand," "laborer," or some such thing, whereas the questionnaire may say "Jackson Woolen Mills," and one is left to guess whether the man is president or sweeper. When people write their own biographies either in questionnaires, "*Who's Who*," or the *Congressional Directory*, far more rate themselves too high than too low. Their wives, who make out many of the questionnaires, are still more likely to do so. Accordingly a good deal, although by no means all, of the difference between the two percentages for both professional men and unskilled laborers is probably due to over-rating. All this indicates that while the persons who answered the questionnaire presumably average higher than the others in social and economic status, the difference is not enough to prevent the final results from being truly representative.

This chapter as a whole may be summed up by saying that we set out to study the Huntington family, but soon changed our purpose and devoted ourselves to obtaining the best possible sample of an old colonial stock from top to bottom. The people named Huntington are excellent for this purpose. About 90 per cent of them are descended from old colonial families of Puritan extraction. Since those who filled out the questionnaire appear to be a little superior to the remainder, the results based on the questionnaire, but not on the other methods which we shall first use, must be toned down a little. It is evident statistically, however, that this toning down is not large enough to alter the main conclusions. This is true in spite of the fact that the conclusions are so favorable that critics may accuse us of glorifying the early Puritans and making high claims for their descendants. There is no way of replying to such criticism except for some one else to make a more exhaustive study than has been possible with the time and means at our disposal.

Chapter II

WHAT'S IN A NAME

HAVING seen that the sample family here chosen is truly representative of the old New England stock biologically, our next question is whether this is also true socially. In investigating this we shall find that the people named Huntington are surprisingly similar to those bearing other distinctively Puritan names. All these descendants of the old Puritans, however, are conspicuously different not only from the more recent types of immigrants, but from the general English stock of the entire country. They show this difference in their choice of occupations, but even more notably in their success in these occupations. Hence the people named Huntington are truly representative of the old Puritan stock as a whole. The method which leads to this conclusion is a comparison of the present status of this name with that of two types of old colonial names and with names of still other types.

The first colonial type consists of names still borne almost entirely by persons descended largely from Puritan stock. The names Coolidge, Hooker, Lyman, and Trumbull have been chosen for the comparison. These names, like those that follow, were selected solely because they are familiar examples of a well known type. Although the descent of the persons who bear them is undoubtedly traced partly from other types of ancestors, by far the major part is traced from colonial Puritan ancestors who came during the first migration between 1620 and 1642. With these we shall put the

name Van Dyke, which represents an early Dutch stock. These six names are by no means common. In the directories of fourteen large representative cities with a total of nineteen million people, all of them together occur only 2046 times, the numbers ranging from 173 in the case of Trumbull to 673 in that of Lyman. If all the Americans bearing these six names are distributed in the same way as the Huntingtons, which must be substantially the case, they comprise about 35,000 people, as is explained in Appendix G.

As a second type we shall use five relatively widespread English names, Adams, Brown, Edwards, Stone, and Williams. Even the smallest of these, Stone, is represented by at least 5,000 names in the directories of the fourteen cities mentioned above, while Edwards has over 7,500 representatives, Adams 10,000, Williams 35,000 and Brown 47,000. In the fourteen cities here used these five names occur 107,500 times. The total number of persons bearing them in the whole United States is probably about 1,800,000.

These standard names were selected not only because they prevail widely in practically all parts of the country, but because they are partly Puritan and also belong to a great many people of English origin whose ancestors came to the United States at each of the times when immigration has been active. Some of the most distinguished Americans have been called by them, and each is borne by limited groups who are of the same character as our first, or distinctively colonial group. The people bearing these names, however, represent far more than the early New England Puritans, for a great many of them settled not only in early New England during the seventeenth century, but outside New England in the eighteenth century, while another large group came to the United States in the nineteenth century. This is evident from a comparison of four sets of data, namely, (1) Savage's *Genealogical*

Dictionary of the First Settlers of New England, (2) the census volume entitled *A Century of Population Growth*, (3) data from the directories of fourteen large cities including one-sixth of the country's population, and (4) the detailed data for all the Huntingtons in the entire country.

In his *Genealogical Dictionary* Savage gives a list of the men of the first three generations among the New England settlers who arrived before 1692. In this he mentions 7 Trumbulls, 9 Hookers, 9 Huntingtons, 10 Lymans, and 14 Coolidges, making a total of 49 men belonging to the families that we have selected as representatives of the distinctively Puritan names. The five partially Puritan names were comparatively numerous then as now, the numbers recorded by Savage being Edwards 25, Stone 49, Adams 67, Williams 103, and Brown 143. This makes a total of 487, or almost exactly ten times as many as in the other group. These names, of course, were at that time just as representative of the Puritans as were the less widespread names. Brown was the most common then as now, and the others followed in the same order as now except that Edwards and Stone have changed places.

Coming down to 1790, the tables in *A Century of Population Growth* show that in that year the number of heads of families bearing names of the distinctively Puritan type in New England was Trumbull 36, Hooker 39, Coolidge 44, Huntington 108, and Lyman 114. The total is 341, or 7 times as many as the men recorded by Savage. It also appears that New Englanders then comprised about 85 per cent of all the persons of these names in the country, or possibly 82 or 83 per cent if we allow for a few Trimbles and Trembles of the Middle Atlantic States who are included with the Trumbulls in the census. In 1790 the heads of families bearing the five partially Puritan names and living

in New England numbered as follows: Edwards 148, Stone 465, Adams 654, Williams 1149, and Brown 1533. The total is 3949, or 8 times as many as are mentioned by Savage. The difference between 7 times as many for one group and 8 times as many for the other is balanced by the fact that the census of 1790 shows that the average size of the families living at home was 6.3 persons among the distinctively Puritan type and only 5.6 among the partially Puritan types. Therefore in New England during the eighteenth century the two types of names must have increased at almost exactly the same rate.

In 1790 the distribution of the more widespread or only partially Puritan names was quite different from that of the more distinctively Puritan group. At that time, as we have just seen, fully 82 per cent of all the Americans with the distinctively Puritan names lived in New England, and most of the others lived in New York. On the other hand, only 43 per cent of those with the partially Puritan names lived in New England; the rest were scattered quite evenly over the country. To give the figures in detail, the percentages which lived in New England among the distinctively Puritan names were Hooker 57, Huntington 89, Coolidge 95, and Lyman 98. We omit Trumbull because *A Century of Population Growth* does not separate it from Trimble and Tremble. The corresponding percentages among the partially Puritan names are Edwards 25, Williams 33, Brown 43, Adams 51, and Stone 65. This contrast, which would be stronger if Hooker and Stone were omitted, can only mean that during the eighteenth century many of the non-Puritan settlers who then came to the colonies outside New England bore names of the partially Puritan type whereas very few or none bore the distinctively Puritan type.

Since 1790, according to our estimate of their present numbers as given in Appendix G, the people bearing the more

distinctively Puritan names have increased approximately 13-fold. Those bearing the partially Puritan names, on the contrary, have increased 81-fold. The facts already presented indicate that until 1790 the rate of increase in the two types of families in New England was essentially the same. Such being the case, it is scarcely possible that any difference in the size of families in later times, if such there were, can have caused one group to increase six times as fast as the other. Immigration seems to be the only reasonable explanation.

To sum the matter up, in New England, according to Savage, the people with the partially Puritan names were 10 times as numerous as those with the purely Puritan names at the beginning of the eighteenth century, and the census shows that approximately the same was true in 1790. In the country as a whole, however, the partially Puritan names at the latter date had almost exactly 20 times as many representatives as the distinctively Puritan names. The difference can be accounted for only on the basis of immigration of people bearing the more widespread names to parts of the colonies outside New England. At present the people with the more widespread names appear to be about 62 times as numerous as the others, a difference which again can only be explained on the assumption that during the nineteenth century there were many immigrants bearing the more widespread names and few bearing the distinctively Puritan ones. Thus our final conclusion is that the people who now bear the partially Puritan names are descended not only from seventeenth century Puritan ancestors, but from eighteenth century non-Puritans elsewhere, and from nineteenth century immigrants of the types peculiar to that period. Those with the distinctively Puritan names, on the contrary, are descended in the main from early New England Puritans.

This is natural, for the prevalence of the more widespread partially Puritan names not only among the Puritans, but in England even in our day, makes it certain that there were many English people of these names from whom immigrants could be drawn.

In order to round out this study we have also selected a third group of names which are especially common among the stocks other than English which make up the American people. O'Brien, with 13,200 representatives in our fourteen cities, and Flood with about 1,500 stand for somewhat the same thing among the Irish and Scotch-Irish as Brown and Stone among the people of English descent; Larson, or Larsen, is similar among the Scandinavians; Wagner and Schwartz among the Germans; Russo among the Italians; and Cohen and Levine among the Jews.[1] These seven names, aside from Flood, are almost as common as those in the partially Puritan English group. This is evident from the fact that in our fourteen cities their numbers range from over four thousand in the case of Russo to nearly thirty-three thousand in that of Cohen. Their total number in the fourteen cities is 95,567, or 88 per cent as many as the preceding group. People of recent foreign origin, however, are largely confined to the northeastern quarter of the United States from St. Paul and St. Louis to the Atlantic coast. Moreover, most of them, especially those like the Cohens, Russos, and O'Briens, are preëminently city people. New York alone, with only a third of the total population of the 14 cities,

[1] The two spellings Lars*e*n and Lars*o*n are both used everywhere in this investigation. Such alternative spellings as Browne, Levin, Schwarz, Van Dyck, Cohn, O'Bri*a*n, and O'Br*ya*n are used only in the case of the Encyclopedia Brittanica, the Harvard Library, and a few criminal lists where the different spellings are mixed together. The effect of this on the figures which are given later is negligible except in the case of the encyclopedia where it gives an advantage to the foreign names.

contains 47 per cent of the O'Briens, 73 per cent of the Cohens and Levines, and 77 per cent of the Russos. Chicago has 52 per cent of the Larsens. Hence these foreign names may not represent more than half as many people as does the second group. If we assume that the individual families among the people bearing all names have the same size, which may not be quite true, the number of persons bearing these eight representative names of the new immigration is approximately 864,000 according to the estimates of Appendix G.

If we had known how interesting this study of names was going to be, we should have selected still others, including some that are less frequently used among more recent immigrants. Names would undoubtedly have been found belonging to relatively pure lines of descent and thus corresponding to the distinctively colonial group, but what qualities they would have shown is not clear. When we finally rounded up our work and began to get results, the lack of both time and money prevented further study. What is here given is only a beginning. It is to be hoped that others will extend the work to hundreds, or thousands of names. Our purpose was merely to choose certain foreign names whose wide use makes them of the same general type as Brown and Williams. Other more typical names might perhaps have been chosen, but the ones here used apparently represent their respective ethnographic groups to about the same degree that Brown and Williams represent the English stock in America.

Having chosen these nineteen names, the next task was to size them up. The first step in this was to find lists showing occupations, and then those showing merit or distinction on the one hand, and demerit on the other. The occupational status of the nineteen names may be divided into the professions, business, and other occupations. The professional

lists that have been available are as follows: (1) *American Men of Science*, (2) *Who's Who among American Authors*, (3) *Who's Who in Government*, (4) the *Dental Register*, (5) the *Medical Directory*, and (6) the *Martindale-Hubbel Law Directory*. Thus six professions are quite thoroughly represented by lists embracing the whole country. Business is represented by the names in the voluminous list of Dun and Bradstreet's Mercantile Agency. Other occupations are not studied here because data are scarce. An attempt was made to use lists of taxi drivers, licensed vendors, and the like in New York City, but the number of English names was so small that it did not seem worth while. The invention of devices that are patented is not exactly a profession, but it indicates how people occupy their time. Therefore lists of patentees are also used in this chapter. When we know how far a given group of people bearing the same name is engaged in professional pursuits, in business, and in making inventions, we can draw many correct inferences as to other occupations.

The number of authors, lawyers, business men and so forth bearing any special names does not mean much unless we also know how many other people bear the name. The first step in this was to count the names in the directories of the following fourteen representative cities: New York, Chicago, Philadelphia, Boston, Detroit, Cleveland, St. Louis, Baltimore, Washington, Cincinnati, Indianapolis, Louisville, Toledo, and Nashville. These, as has already been said, contain a total population of over nineteen million people. They are scattered over a large section of the United States in which live half the country's inhabitants. Hence they ought to present a fair sample of the whole. This is certainly the case among the Huntingtons, for whom alone we have full data. In the United States as a whole, it will be

remembered, we obtained some knowledge of 1963 adults who were born with this name—1601 men and 362 unmarried women. The fourteen large cities contain 15.7 per cent of the total population, and 15.9 per cent of these persons. In this case, then, the fourteen cities contain almost the same proportion of Huntingtons as of the population of the entire country. This appears also to be approximately true of all the English names that we are using, but not of the new names, especially those like Cohen and Russo, which are concentrated in the big eastern cities. (See Appendix G.)

Children, by the way, do not enter into the present problem to any appreciable extent. The only non-adults included in our occupational data are a few young people who are independently at work and are therefore listed in city directories, or even in lists of business men and patentees. Women also enter into the matter very slightly, for only a few are included in most of the lists. In the directories wives are not counted, but women who are at work independently are treated in the same way as men. This, however, has no special bearing on our results, for in each list all names are treated alike.

In order to see what our data mean the next step is to find how many authors, doctors, business men, and so forth there are for every thousand adult men of the same name in the United States as a whole. The total number of people of each name has been estimated from the directories of the 14 cities mentioned above and from the Adjutant General's records of the men in the United States Army during the World War, as is explained in Appendix G. The distinctively colonial names of Coolidge, Hooker, Lyman, Trumbull, and Van Dyke, for which no army data are available, appear to be distributed over the country in essentially the same way as the names Adams and Williams, for which there are

army data, and as Huntington for which the data for the entire country are almost complete. Therefore, for these eight names we assume that those found in the 14 city directories represent 16 per cent of the total.

A comparison of the Army records and the directories indicates that the other names are more highly concentrated in the cities. This concentration is almost negligible in the case of old names like Brown and Stone; it is moderate with names like Larson and Wagner; and extreme with Schwartz, Russo, and especially Cohen and Levine. Hence the method explained in Appendix G has been used in order to arrive at an approximate estimate of the true number of people bearing each name. It seems wise to use estimates for the whole country rather than data for individual cities because so many leaders live in suburbs and would be omitted if the cities alone were used. These estimates are the basis of most of the tables given below. Since we are dealing almost entirely with men, the following tables show the number of persons per thousand men over 25 years of age, on the assumption that 24 per cent of the population consists of such men, as is the case in the native white population of the United States as a whole. It should be noted, however, that the tables as to business men and the Social Register are based on individual cities and not on the country as a whole, so that no estimates are needed.

In studying all the tables, aside from these last two, it must be remembered that the data as to the non-English names representing recent immigration are not so accurate as those pertaining to the older types of names. The newer names are introduced to round out the picture and to show how greatly people's characteristics vary in harmony with their names. Our main conclusions, however, do not in any respect depend on them, being based on the two types of old

English names, as to which the chances of error are insignificant in comparison with the strong contrasts to which attention will now be directed.

Table I shows how many authors of each name are mentioned in *Who's Who among Authors* for every 100,000 men over 25 years of age bearing the same name in the United States as estimated in Appendix G. The differences are extraordinary. A person named Coolidge, Hooker, Huntington, Van Dyke, Lyman, or Trumbull, averaging them all

TABLE I—AUTHORS

Number of authors in "Who's Who among American Authors" per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Coolidge	1020	Adams	86	O'Brien	19
Huntington	385	Edwards	48	Levine	16
Van Dyke	310	Brown	39	Larsen	12
Hooker	232	Stone	37	Wagner	12
Lyman	179	Williams	28	Russo	0
Trumbull	139	Flood	23	Schwartz	0
		Cohen	23		
Average	378	Average	40	Average	10

together, is at least eight times as likely to be an author as is one bearing any of the five old English names, Adams, Edwards, Stone, Brown, or Williams. He is over forty times as likely to be an author as is the average person called by the six new foreign names of Group III in the table. Flood and Cohen, be it noticed, fall at the end of Group II, but the position of both names, as well as of Levine and to a less extent Schwartz is everywhere somewhat doubtful, as is explained in Appendix G.

The relative positions of Group I and of the first five names of Group II in the preceding table are certainly not due to any prejudice on the part of the editor of *Who's Who among American Authors* against the second group. A great many of the people who bear such names as Adams and Edwards are justly proud of an ancestry as distinguished as any in America. Indeed our choice of these two names was based not only on the fact that they are widely prevalent, but on the further fact that in the history of this country it would be hard to find any names more highly distinguished. If the Puritan families among them, or among the people named Brown, Williams, and Stone, could be segregated, they would doubtless equal or excel the families in the first section of the preceding list. Nevertheless, as a whole, the group of more widely used names fails to hold its own. Must we conclude, then, that people with Puritan ancestry and names like those of Group I get a different education from those in Group II? Do they have better opportunities? Do they have a different biological inheritance? What makes them so much more likely to choose careers as authors? If those with dominantly Puritan ancestry could be separated from the rest of Group II would they behave like Group I?

The contrast between Groups II and III in the table of authors is important, although less significant than that between Groups I and II. Here again the question arises whether the contrast is due to education, opportunity, innate ability, or some other cause. If we put Cohen and possibly Flood in Group III, as might legitimately be done, the names sort themselves perfectly into three types: first, almost purely old colonial; second, old colonial but also widespread among all types of English immigrants to America; and third, belonging to relatively recent non-English stocks that have come to this country during the past century.

Let us see whether the different types of names sort themselves in the same way among scientists. It is probably easier to become a scientist than to gain recognition as an author. At any rate a great many men who merely have good but not outstanding ability prepare Ph.D. theses which gain for them the right to be counted among the 22,500 American contributors to science listed in *American Men of Science*. Nevertheless, in Table II the scientists are arranged almost like the authors. The numbers to the left

TABLE II—SCIENTISTS

Number of scientists in "American Men of Science" per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
1. Coolidge	765	15. Levine	106	13. Cohen	49
4. Hooker	619	10. Stone	105	16. Larsen	41
6. Trumbull	278	7. Adams	90	17. Wagner	35
2. Huntington	231	8. Edwards	77	12. Flood	23
5. Lyman	215	9. Brown	68	14. O'Brien	13
3. Van Dyke	186	11. Williams	50	18. Russo	0
		19. Schwartz	49		
Average	382	Average	78	Average	27

of the names show the rank of each name in the preceding table of authors. They vary a little from the order in the present table, but Levine and Schwartz are the only names which rise more than three places, while Flood and O'Brien fall similarly. The contrasts between the averages for Group I and the other groups are not so great as in the case of the authors, but they are of the same character and equally significant.

In their tendency to become doctors, dentists, and govern-

ment officials people of different names seem to behave much as in becoming authors and scientists. This is shown in

TABLE III—DOCTORS

Doctors in the "Medical Directory" per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Hooker	1615	Levine	644	Cohen	398
Coolidge	1550	Adams	614	O'Brien	366
Huntington	1156	Edwards	565	Flood	301
Van Dyke	1052	Trumbull	556	Larsen	276
Lyman	789	Brown	496	Wagner	245
Stone	770	Schwartz	459	Russo	0
		Williams	420		
Average	1152	Average	533	Average	264

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TABLE IV—DENTISTS

Dentists in the "Dental Register" per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Huntington	616	Adams	286	Williams	190
Schwartz	394	Cohen	279	O'Brien	151
Hooker	387	Levine	268	Wagner	134
Coolidge	381	Flood	254	Larsen	125
Stone	338	Van Dyke	248	Russo	0
Lyman	287	Brown	214	Trumbull	0
		Edwards	199		
Average	401	Average	247	Average	100

Tables III, IV and V. The doctor's table is almost like that of authors except that one of the old colonial names, Trumbull, drops out of the highest group, being replaced by

Stone, while Levine and Schwartz are both in Group II. Other tables indicate that Stone belongs midway between the distinctively Puritan and the more widespread types of names. Among the dentists the grouping is in general about the same as among the doctors except that Schwartz comes close to the top of Group I, while Van Dyke drops to Group II, and Trumbull to the bottom of Group III. This has little significance, however, since mere accidents may greatly alter the positions of the names with few representatives.

TABLE V—GOVERNMENT OFFICIALS

Government officials in "Who's Who in Government" per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Hooker	155	Adams	108	Schwartz	34
Huntington	154	Edwards	87	Flood	23
Trumbull	139	Lyman	72	Wagner	18
Coolidge	128	Brown	66	Cohen	13
Van Dyke	124	Williams	62	Levine	0
Stone	114	Larsen	61	Russo	0
		O'Brien	46		
Average	136	Average	72	Average	15

The Trumbulls, for example, are a small family. In the directories of our fourteen cities they are represented by only 173 names, which is about the same as the Coolidges (189), but not much more than half as many as the Hookers (311), and the Huntingtons (312), and considerably less than the Van Dykes (388), or Lymans (673). Hence the absence of dentists among the Trumbulls may be ascribed to accident. If they were ten times as numerous, they would probably have enough dentists to put them in Group I. Among the

higher government officials of the next table they come back to their usual place, while the Lymans drop into the second group. The Adams and Stone families here behave so much alike that both might be put in Group I, just as might have been done with Adams and Lyman in the table of dentists.

The tendency to make inventions seems to manifest itself among persons of various names in almost the same way as the tendency to enter the professions, but with interesting differences. Table VI shows how many patents were issued

TABLE VI—PATENTS

Patents issued in 1927 and 1930 per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Trumbull	972	Larsen	340	Schwartz	129
Huntington	925	Stone	316	Cohen	101
Coolidge	765	Brown	274	Flood	93
Lyman	430	Williams	264	Russo	67
Hooker	387	Edwards	253	Van Dyke	62
Wagner	361	Adams	236	Levine	49
		O'Brien	161		
Average	640	Average	263	Average	84

in the years 1927 and 1930 to people of various names per 100,000 adult men of the same name in the United States, of course with the corrections set forth in Appendix G. It is evident that the old colonial families have a strong tendency to take out patents. All five of the more purely Puritan names take their places in the highest group, and with them are the Wagners. The Van Dykes, however, have dropped to the third group. The other five old English names—the five that are very widespread—appear in their usual place in

the second group, but Larsen stands ahead of them, and Adams goes to the bottom. In the lowest group, aside from Van Dyke, we find nothing except names belonging mainly to relatively recent immigrants.

This raises the question of how far the stimulus to invention comes from actual contact with machines in factories, and how far it is due to the presence of certain innate mental tendencies. We cannot answer this, but it seems that inventions come mainly from a relatively small group of engineers

TABLE VII—LAWYERS

Lawyers in the Martindale-Hubbel Law Directory per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Coolidge	1148	Stone	261	Edwards	96
Cohen	518	O'Brien	215	Wagner	94
Levine	373	Van Dyke	186	Williams	81
Trumbull	417	Huntington	154	Hooker	77
Lyman	394	Adams	141	Russo	67
Schwartz	348	Flood	139	Larsen	28
		Brown	118		
Average	533	Average	173	Average	74

who may be classed as scientists. Whatever may be the truth as to this, it is clear that in general the families which send a large proportion of their sons into the professions also supply a great many inventors.

In view of the comparative uniformity among the other professions, it is curious to find that among lawyers the arrangement of the groups is considerably modified, as appears in Table VII.

Here the names Cohen, Levine, Schwartz, and O'Brien

all stand unusually high, while Huntington and Hooker are exceptionally low. Moreover, the contrast between the highest and lowest groups is much less than in any previous table. The tendency to become lawyers is almost as strong among the newer immigrant stocks as a whole as among the old colonial stocks, but the new stocks vary enormously, the Jewish and Irish names being borne by a very high percentage of lawyers, and the German, Scandinavian, and Italian names by very few. In no other occupation for which we have data are there such great differences between the various non-English names. When all the distinctively Puritan families and the Van Dykes are lumped together and compared with the newer immigrant families similarly lumped, the tendency to become lawyers is apparently 1.5 times as strong among the Puritan type. Another noteworthy fact is that the newer stocks as a whole are twice as likely to become lawyers as are the people bearing the more widespread English names. Nevertheless the three types of names do not differ much in their production of lawyers. A ratio of 1.5 times as many lawyers among the old colonial families as among the newer immigrants, in proportion to their numbers, is very different from the ratios in some of the other professions. Among dentists the corresponding ratio is 1.8, among patentees 2.8, doctors 3.4, government officials 4.5, scientists 8.2, and authors 24.4.[2] Although these numbers are only approximate, by reason of the concentration of some names in cities, the relation which any one of them bears to the others is exact. We can say with confidence that so far as the par-

[2] These numbers, be it noticed, are not derived directly from the tables on the preceding pages, but are based on what are known as weighted averages formed by adding together all the persons of each type. The averages in the little tables given above are not weighted and a small family group gets as much weight as a large one.

ticular names here used are concerned, the people of recent European origin are only one eighth as likely to become scientists, and one third as likely to become doctors as are those of distinctively Puritan origin. Persons of foreign stock are probably attracted to law partly by the fact that people of recent foreign origin show a strong tendency to go into business, and therefore need lawyers. Moreover, the intimacy of the relation between a lawyer and his client probably has much to do with the matter. It is much easier to explain an embarrassing situation to a person of one's own type than to one whose outlook on life is wholly different.

This brings us to the world of business. Dun and Bradstreet's Mercantile Agency publishes a standard list of the financial ratings of the commercial and industrial enterprises of the entire United States. The 1,900,000 names on the list are constantly revised. A new issue comes out every month. A single month such as November, 1932, on which the data here used are based, may show 188,000 new names, 242,000 changed ratings, and the omission of 253,000 names. As a summary of American business enterprises the list is remarkably complete. The only trouble with it for our purposes is that the enterprises are listed under their own names and not under those of the men who run them. Hence many active business men do not appear at all. Moreover, a personal name often continues to be used long after the person who bore it has died, or left the business. Nevertheless, if a business bears a personal name, the chances are probably ninety-nine out of a hundred that somebody of that name was connected with the business in an important capacity within a generation or so.

The tendency to do business under corporate names must be taken into account in estimating the significance of the table of business men given below. This tendency applies

especially to banks, insurance companies, railroads, public utilities, mines, and large industrial concerns like Standard Oil, General Motors, and United States Steel. The extent to which this is true may be judged from the fact that a current issue of a New York paper mentions transactions in the stock of 658 concerns with corporate names against 345 with personal names. The vast majority of businesses, however, are small and have personal names, so that perhaps half the country's business is done by concerns with such

TABLE VIII—BUSINESS

Business men in Dun and Bradstreet's Mercantile Directory in 14 cities per 1000 persons of the same name in these cities

GROUP I		GROUP II		GROUP III	
Schwartz	77.7	Russo	28.7	Lyman	17.8
Cohen	58.6	Van Dyke	28.3	Larsen	17.2
Trumbull	52.0	Adams	25.8	Coolidge	15.9
Levine	51.2	Hooker	25.7	Williams	13.3
Stone	36.3	Huntington	22.4	O'Brien	12.2
Wagner	30.0	Brown	20.4	Flood	8.3
		Edwards	18.7		
Average	51.0	Average	24.3	Average	14.1

names. These would supply a fair sample of the whole, were it not that persons of the old Puritan stock, as will appear in the next chapter, appear to be especially likely to be connected with the larger and better established businesses —the ones with corporate names. Moreover, they tend to live in suburbs. Hence they are not fully represented in Table VIII showing the number of business enterprises in our fourteen cities per thousand persons of the same name in the same cities. In this case no allowance need be made for the concentration of the newer immigrants in cities.

Even if the fullest allowance is made for the use of corporate names, the tendency to go into business evidently follows very different rules from the tendency to go into the professions aside from the law. Of the six distinctively old colonial names of the less widespread type only Trumbull falls in the first group of the business table above. Three, namely Van Dyke, Hooker, and Huntington, come in the second group. They might possibly rise to the first if allowance could be made for corporations and suburbs, but there is no certainty about this. Coolidge and Lyman fall in Group III. Among the more widespread English names of the partially Puritan type, Stone comes in the first group, Adams, Brown, and Edwards in the second, and Williams in the third. On the other hand, among the newer foreign names those that are either Jewish or German all come in the first group. Although Schwartz is a genuine German name, it is borne by many Jews. On the other hand, O'Brien and Flood, the two Irish names, both show a minimum tendency to go into business. This may not be representative of all Irish names, but it is interesting in contrast with the Jewish names. If we lump all businesses pertaining to the old and distinctively colonial names together and compare them with all those run by persons bearing the more widespread English names, or the new foreign names respectively, we get the following numbers of business concerns per thousand names in the directories of 14 cities.

Distinctively colonial names	24.4
Widely used English names	19.2
Newer immigrant names	24.8

This seems to show that the tendency to go into business is nearly the same in all three of our main types, but a little weaker among people bearing the widely used English names

than among the others. Among the Jews and Germans, however, so far as these few names are concerned, the tendency toward business is two or three times as strong as among persons of English descent, and three or four times as strong as among those of other non-English descent. How far these names are truly typical of the various nationalities we do not attempt to say.

Summing up the whole thing, one object of this chapter was to find out whether the Huntington family can properly be used as a sample of the old Puritan stock as a whole. The answer seems to be that this is the case so far as distribution among various occupations is concerned. Another object was to discover what differences there are between the distinctively Puritan stock and other parts of the population of both English and non-English extraction. So far as occupations are concerned the answer is very clear. The old colonial families, especially those which are mainly of Puritan origin, show a strong tendency to go into the professions of writing, science, and medicine. They also show more than the average tendency to go into dentistry, government work, the making of inventions, and law. Their tendency to go into business is about like that of the persons of other names when all are averaged together, but it by no means rivals that of the Jews. From the data as to the Huntingtons which will be given later it may be inferred that the old colonial families also comprise about the normal proportion of skilled laborers, but have relatively few unskilled laborers and farmers.

Chapter III

THE MEASUREMENT OF MERIT

A FAIR estimate of the various types of names demands a knowledge not only of what their bearers do, but of how well they do it. Hence our next inquiry leads to lists which indicate more than the average success. We may well begin with the moderate and rather easily attained success of having a good rating according to Dun and Bradstreet's Mercantile Agency. In the last chapter we saw that on the whole, in spite of great differences between such newer stocks as the Cohens and O'Briens, our three main types of names, old Puritan, widespread old English, and widespread new foreign, behave almost alike so far as participation in business is concerned. Are the three types equally similar from the standpoint of credit?

Before we answer these questions a little explanation is needed. Dun and Bradstreet's Mercantile Agency rates business concerns in two ways. The first rating, by letters from *AA* to *M*, is based solely on "estimated pecuniary strength." *AA* means a strength of over $1,000,000; *A*+ over $750,000; and so on down to *M*, less than $500. The other rating is called "general credit." For this purpose, numbers are used except that the highest rating is *A1*. Such a rating means "high credit" plus an estimated pecuniary strength of over $500,000. A rating of *1* means either "good credit" with a similar pecuniary strength, or high credit with a smaller pecuniary strength of $125,000 to $500,000. A rating of 1½ may go to a concern with an estimated pecuniary

rating of anywhere from $35,000 to a million or more, for a small but very high-grade concern is as likely to pay promptly and fully as is a very large one whose credit is only "fair." All three of these highest ratings together comprise only 5 per cent of the entire list, and are never given to concerns whose credit is "limited." A rating of 2 is so good that only 3 per cent get it. Passing by ratings of $2\frac{1}{2}$, 3, and $3\frac{1}{2}$ we come to 4 which means limited credit with a pecuniary strength ranging from *M* ($500) to *F* ($10,000 to $20,000). This

TABLE IX—DUN AND BRADSTREET'S RATINGS

GROUP I			GROUP II			GROUP III		
	Cases	Average rating		Cases	Average rating		Cases	Average rating
Trumbull.....	29	2.81	Brown.....	983	3.89	Russo.....	127	4.06
Hooker.....	25	3.18	Flood.....	37	3.89	Cohen.....	1979	4.08
Edwards.....	141	3.75	Stone.....	209	3.91	Coolidge.....	7	4.14
Adams.....	277	3.76	O'Brien.....	161	3.92	Larsen.....	123	4.15
Wagner.....	311	3.78	Williams....	463	3.93	Levine.....	651	4.16
Huntington...	40	3.86	Lyman.....	36	3.94	Van Dyke...	25	4.24
			Schwartz....	1048	4.02			
		3.52			3.93			4.14

includes 22 per cent of the ratings. From all this it is evident that while the pecuniary strength of a business enters into the numerical ratings, reliability is far more important. In using the ratings we have taken them at their face value except that a rating of *A1* is reckoned as $\frac{1}{2}$, while no rating (39 per cent of the cases) counts as 5. According to Dun and Bradstreet, "the absence of a rating, whether of capital or credit, indicates those whose business and investments render it difficult to rate definitely." In actual practice

this generally, though not always means that prompt payment of obligations is uncertain.

Table IX shows the average ratings of the different names, together with the number of businesses upon which it is based. In most cases only the concerns in the fourteen cities named in the last chapter are used. The six distinctively old colonial names and Flood, however, are so uncommon that here, unlike our previous procedure, we have included not only the fourteen cities, but all of Connecticut, Massachusetts, Vermont, New York, Ohio, and California.

The table starts in the usual way, but soon departs from it. Among the distinctively Puritan names Trumbull and Hooker take the lead, while Huntington just barely squeezes into the upper six. Lyman, however, goes to the bottom of the second six. Coolidge stands well down in the third group, but since its position depends on only seven concerns, this is of little significance. Just why Van Dyke should go to the bottom of the third six is not clear. Among the widespread old English names Edwards and Adams stand in the first group, and the other three in the second, so that their general position is about as in the other tables. Among the foreign names Wagner achieves high rank. This, as well as the extremely high rating of Trumbull, is partly due to a few large concerns. These have branches in several cities and hence are counted more than once. Even without these, however, the average rating would be good. The two Irish names are the only ones of the foreign type in the second group; whereas the Jewish names, together with the two of Italian and Scandinavian origin, are in Group III. The reversal between the positions of the Irish and Jewish names here and in the table showing the number of businesses is interesting. Taking each main type of name as a unit, the average ratings, and the percentages of concerns with a rating of 3 or better are as follows:

	Average rating	*Percentage with rating of A1 to 3*
I. Old Colonial names (162 cases)	3.66	31.5*
II. Widespread English names (2073 cases)	3.87	25.6
III. Newer foreign names (4437 cases)	4.05	15.4

* 35.0 omitting Van Dyke.

Where the number of cases is so large, such differences as appear in the foregoing figures are highly significant, even though they seem small. They indicate that from the standpoint of financial reliability, which is a matter of integrity more than of capital, the business concerns run by the old Puritan families stand in the lead; those run by people of ordinary English descent come next, but the Irish rank with them; while those run by the newer foreign types, aside from the Wagners, stand lowest. The most significant figures are the percentages in the second column. A business run by a person of the older Puritan descent is twice as likely to get a rating of 3 or better as is one run by persons of recent European descent, and fully a third more likely to do so than is one run by persons of ordinary English descent. In all these comparisons it must be clearly remembered that the foreign names, having been chosen because they are widely used, are comparable to the widespread English names and not to the distinctively old colonial names. It would be interesting to choose some less widely used foreign names and see whether they would rival Group I.

While we are talking about business, let us apply a test of a different sort, a much more personal test. This is based on *Poore's Register of Directors*, 1929. That book lists about 70,000 among approximately 120,000 persons who are directors of corporations. It includes trustees of colleges, hospitals, and other philanthropic institutions, but the overwhelming majority of the directorates are in business enterprises.

The value of *Poore's Register* lies in the fact that the records are purely personal. All the men and women in it are listed

TABLE X—DIRECTORS

Directors in Poore's Register per 100,000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
2. Huntington	1462	10. Stone	370	19. Schwartz	136
1. Coolidge	1275	7. Adams	319	12. Flood	116
6. Trumbull	834	8. Edwards	237	13. Cohen	106
4. Hooker	696	9. Brown	218	15. Levine	106
5. Lyman	573	11. Williams	205	16. Larsen	89
3. Van Dyke	558	17. Wagner	169	18. Russo	0
		14. O'Brien	143		
Average	900	Average	237	Average	92

TABLE XI—DIRECTORATES

Directorates per person among those listed in Poore's "Register of Directors," omitting concerns in which each person does his main work

GROUP I		GROUP II		GROUP III	
Trumbull	5.83	O'Brien	2.92	Larsen	1.96
Coolidge	3.90	Stone	2.89	Hooker	1.89
Lyman	3.78	Cohen	2.71	Wagner	1.61
Adams	3.08	Williams	2.66	Schwartz	1.56
Edwards	2.96	Flood	2.60	Levine	1.54
Huntington	2.95	Brown	2.36	Russo	0.00
		Van Dyke	2.00		
Average	3.75	Average	2.59	Average	1.43

according to their positions in their own personal business and also as directors in other corporations. Thus we are able to ascertain not only how many directors there are in

proportion to the number of people bearing any particular name, but also how many directorates are held on an average by persons bearing each name. The results are given in Tables X and XI.

These two tables tell the same story, but it is clearer in the first than in the second. The first is the more important because in these days the splitting of a single business into many separate corporations often causes a needless and even harmful multiplication of directorates in the hands of one man. In the first table the three groups are almost identical with our three types of names. The similarity of the arrangement of names here and among the authors, with whom we started these comparisons, is seen by reference to the numbers preceding the names. Group I is distinctively colonial and is identical with the corresponding group of authors. In Group II the table contains the five more widespread English names, together with Wagner and O'Brien; and in Group III all the other foreign names. Averaging the types of names separately and weighting each name in the usual way according to the number of persons concerned, we find the following:

		Directors per 10,000 adult men	*Directorates per director*
Type I.	Old Colonial names (69 cases).....	813	3.24
Type II.	Widespread English names (998 cases)...	232	2.64
Type III.	Newer foreign names (228 cases).....	110	2.14

In proportion to their numbers the old colonial families have three or four times as many directors as have the persons bearing the more widespread English names, and more than seven times as many as the newer foreign stocks. Moreover, each director of the older families holds more offices than do those of the other types. This happens in spite of the fact

that Elias A. Cohen, for example, holds 37 directorates, or a third of all those held by the Cohens, while William H. Williams holds 50, or one sixteenth of those held by people of his name. Let us put together the two kinds of data as to directors, that is, multiply the number of directors per 100,000 men by the number of directorates per man. In proportion to their numbers the relative parts played by the three types as directors then appear as follows:

I. Distinctively old colonial names	11.2
II. Widespread English names	2.6
III. Newer foreign names	1.0

This takes no account of the fact that the size and integrity of the business ventures run by the three types also vary. It gives the same weight to the American Telephone and Telegraph Company as to the struggling little coal company around the corner. If we allow for such differences the contrasts given in the last table would probably be at least doubled. It therefore seems conservative to say that so far as these nineteen names are concerned, it appears that *man for man* the people bearing the distinctively Puritan names are twenty times as influential in business as are those bearing the newer foreign names, and five times as influential as those bearing the partially Puritan but widespread old English names.

Our next step will be a brief review of other measures of success. Membership in the American Association for the Advancement of Science is open to every reputable person. Nevertheless, such membership is a slight mark of distinction. It means that people not only have an interest in science, but are willing to pay dues and spend money in attending meetings in order to keep up with the world's progress. The names in Table XII fall in the usual group-

ing. This time Levine and Larsen, rather than Wagner and O'Brien as in the table of directors, are the foreign names

TABLE XII

Members of American Association for the Advancement of Science per 100,000 adult men of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Hooker	696	Stone	155	Cohen	36
Trumbull	556	Levine	106	Schwartz	30
Huntington	538	Adams	88	Wagner	23
Lyman	430	Edwards	73	O'Brien	21
Coolidge	383	Brown	59	Flood	0
Van Dyke	186	Williams	54	Russo	0
		Larsen	49		
Average	465	Average	83	Average	18

TABLE XIII

Persons in "Social Register" per 1000 persons of the same name in 8 cities

GROUP I		GROUP II		GROUP III	
Coolidge	256.5	Stone	16.7	O'Brien	1.6
Huntington	86.8	Adams	13.4	Schwartz	0.9
Lyman	52.9	Williams	9.4	Cohen	0.1
Hooker	51.5	Edwards	9.0	Larsen	0.1
Van Dyke	35.4	Brown	7.9	Levine	0.0
Trumbull	28.9	Flood	7.8	Russo	0.0
		Wagner	1.8		
Average	85.3	Average	9.4	Average	0.5

that get into Group II. This is one of several indications that these particular groups of Jews and Scandinavians are relatively strong in science.

Another mild but very different indication of merit or achievement is found in the Social Register. As an indication of the people who are leaders in social life and in wealth it is undoubtedly of some value. The figures in Table XIII are based on the Social Registers and directories of only eight cities—New York, Chicago, Philadelphia, Boston, Detroit, Cleveland, St. Louis, and Washington. Their grouping conforms to the usual rule except that this time Flood and Wagner are the new foreign names which get into Group II. The gap between the ratings for Flood (7.8) and Wagner (1.8) is noteworthy. So too, is the excessively high position of Coolidge. This name rises three times as high as the next on the list. This suggests that while Calvin Coolidge was president persons bearing his name were regarded as especially eligible socially. This is not the case, however. The number of Coolidges in the Register was the same (48) in 1911 before Calvin Coolidge became prominent as in 1930. It rose to 55 in 1920, but this also was before Coolidge became president.

It is hard to say how much credit a person deserves for having a card in a library catalog. Many people may say, "Oh, anybody can write some little thing that will get him a card in such a catalog." But such a card generally means a special effort. More than half the time the effort is not part of the ordinary work of getting a living and brings no monetary return. It represents an extra impulse which leads to most assiduous labor with little assurance of any reward except one's own personal satisfaction. Therefore, the cards in a library seem to be a very good measure of the inner urge which in the long run is the basis of all progress. Moreover, there are few better signs of a man's importance than the number of books or articles written about him rather than by him. George Washington plays little part on

library cards as an author, but a great part as a subject. Another important consideration is that personal prejudice arising from race, language, or habits counts far less in writing than in many other lines. Although some people claim that publishers and editors discriminate against certain types of writers, the fact seems to be that in few lines of effort does the quality of the product, as distinguished from the personality of the producer, count for more. The great majority of both publishers and editors care relatively little about the ancestry or personality of their authors. What they want is interesting and saleable manuscripts. Thus it seems that in few lines of effort is the individual who speaks English freely more likely to be fairly represented than in the publications listed in the catalogs of libraries. He may not be recognized as an author in a book like *Who's Who among Authors*, but he is recognized by the librarian.

In order to apply this library test to the nineteen names here used, the cards in the great libraries of Yale, Harvard, New York City, and Boston have been counted. In doing this, such things as towns named Adams, and stone as a material have, of course, been omitted, but cards where the name is that of editor or subject as well as author have been included. No distinction is made between cards pertaining to Europeans and Americans. This is especially important because the Harvard and Yale libraries contain an unusually large number of foreign publications. Thus the foreign names receive a very decided advantage, since the persons of any given name living in America are credited with all the cards belonging to their namesakes in Europe. Under the name Wagner, for example, nearly half the cards at Harvard belong to a special collection devoted to Richard Wagner, the great musician. On the other hand, names like Trumbull are so largely American that the cards belonging

to Europeans are negligible. Thus it would seem that in this test, if anywhere, the foreign names receive a fair showing and have no greater handicaps than the English names. The more purely colonial names certainly have no hint of an advantage over the more widespread English names. Yet Table XIV, where the ratings are expressed as the number of cards per thousand persons of each name instead of per 100,000, faithfully repeats the same old story.

TABLE XIV—LIBRARY CARDS

Cards in four libraries per 1000 adult men (over 25 years of age) of the same name in the United States

GROUP I		GROUP II		GROUP III	
Trumbull	1288	Adams	164	Cohen	32
Huntington	1122	Edwards	107	O'Brien	23
Hooker	812	Stone	90	Flood	22
Coolidge	725	Wagner	81	Larsen	21
Van Dyke	432	Williams	63	Russo	14
Lyman	258	Brown	57	Levine	11
		Schwartz	33		
Average	773	Average	85	Average	21

The only significant change here from the first table—of authors—is that Wagner and Schwartz are the two non-English names in the medium class. If Richard Wagner were omitted, however, this name would fall below Brown, even if all the other foreign Wagners were included. The contrast between the low and high groups is greater here than in any previous case. The chances that a person with one of the names in the high group will write something are about 37 times as great as for the low group. (See Table XIV.)

Who's Who in America plays still another variation of the same tune. Americans with old English names undoubtedly

have a better chance to be included in that book than have persons bearing the newer foreign names. But whether this is due to prejudice, or to lack of conspicuous achievement on the part of the newer stocks is not so clear. This, however, brings us back to the main problem of this book, namely how much of any type of achievement is due to heredity and how much to either physical or social environment. We must leave this unsolved and concentrate for the present on the facts. The outstanding fact here is that the distinctively

TABLE XV—WHO'S WHO

Persons in "Who's Who in America" per 100,000 adult men (over 25 years of age) of the same name in the United States

GROUP I		GROUP II		GROUP III	
Coolidge	2295	Stone	247	Wagner	44
Huntington	1619	Adams	244	Levine	41
Hooker	696	Edwards	157	Larsen	36
Lyman	681	Williams	126	Cohen	36
Van Dyke	496	Brown	122	Schwartz	19
Trumbull	417	O'Brien	83	Russo	0
		Flood	46		
Average	1034	Average	147	Average	29

colonial families have an especially good chance of being included in *Who's Who*. In the case of the Huntingtons, for whom the most reliable data are available, the chances that a man who reaches the age of forty-five will get into *Who's Who* are about one in twenty-five. A Schwartz, on the other hand, has only about one chance in two thousand, approximately speaking. To put it in another way, under the present circumstances one of these names has more than eighty times as great a chance for this particular kind of recognition as has the other. (See Table XV.)

The chances that the newer foreign names will be recognized in such a book as the *Twentieth Century Dictionary of Notable Americans* are of course less than in *Who's Who*. Not only does this book cover the whole period of American history, but it was published as long ago as 1904. Hence the foreign names have little chance of recognition. No such thing, however, is true of the more widespread English names. Yet here the gap between them and the more purely colonial names is unusually great and sharply defined. Note how the

TABLE XVI—AMERICAN NOTABLES

Persons in "Twentieth Century Dictionary of Notable Americans" per 100,000 adult men (over 25 years of age) of the same name in the United States

GROUP I		GROUP II		GROUP III	
Trumbull	1390	Stone	110	O'Brien	5
Huntington	1386	Adams	103	Larsen	4
Hooker	850	Edwards	99	Levine	0
Coolidge	637	Flood	46	Schwartz	0
Lyman	502	Brown	45	Russo	0
Van Dyke	435	Williams	23	Cohen	0
		Wagner	6		
Average	867	Average	62	Average	2

non-English names that get into the second group keep changing. This time one is Flood, which, to be sure, is partly English although mainly Scotch-Irish, while the other is Wagner.

The last and probably the most severe test to which the various names can be subjected is the Encyclopedia Britannica. Here, just as with library cards and American notables, the past as well as the present is included, although most of the names belong to the last century. This, how-

ever, does not help one name any more than another. Moreover, in the encyclopedia only the Americans have been counted among those bearing either the distinctively colonial or the more widespread English names, but all persons bearing any one of the newer non-English names have been included, even though they were born and lived in Europe. Thus the Wagners get credit for Richard Wagner, the composer; the Floods for a statesman in Ireland; and the Cohens for two Jews of Germany and one in Holland. Table XVII

TABLE XVII—ENCYCLOPEDIA BRITANNICA

Persons in Encyclopedia Britannica per 100,000 adult men of the same name in the United States

GROUP I		GROUP II		GROUP III	
Trumbull	417	Flood	23 (0)	Williams	0.7
Huntington	385	Cohen	10 (3)	Larsen	0
Coolidge	255	Stone	9	O'Brien	0
Hooker	154	Schwartz	8 (0)	Russo	0
Van Dyke	62	Wagner	6 (0)	Levine	0
Adams	46	Brown	3	Lyman	0
		Edwards	3		
Average	220	Average	9	Average	0.1

shows the result. The figures in parenthesis show what happens if European names are omitted.

Here the number of persons is so small that mere accidents may play an important part. Nevertheless, the results are practically the same as in the other cases. One difference is that in the high group the Lymans are replaced by the Adamses. The Lymans, although averaging high, do not happen to have had any member, like Roger Williams or John Brown, sufficiently distinguished to be included in the encyclopedia, whereas the Adamses, as also the Edwardses,

although not averaging so high on the whole, have had one very brilliant branch. In the medium group the Floods, Wagners, and Schwartzes find a place because of Europeans. Their inclusion in this group throws the Williamses into Group III, although it would be fairer to put them in Group II. The Cohens, as appears from the numbers in parenthesis, would still be represented in Group II even without their three Europeans, provided we count the spelling Coh*a*n. Another point to be noted in this table is that the contrasts among the different groups are greater than in any previous table. Here the high group averages 24 times as high as the medium group, if Europeans are included, while the low group fades almost out of the picture. If only the Americans are included and if Williams is put in Group II, the rank of Group I is 72 times as high as that of Group II.

The strong contrast between Groups I and II in the encyclopedia table and the practical disappearance of Group III suggest one of the most interesting features of these tables, namely the way in which the data here given illustrate the general principle that the higher the quality, or the more severe the test, the greater is the difference between persons of diverse ability. A fairly stupid person or one with a very poor education may read as well as Einstein, but he puzzles long over a problem in arithmetic, and never really understands a simple algebraic formula which Einstein reads at a glance. In the same way the contrast between the upper and lower types of names increases as we go from the simple or easy to the more complex or difficult activities. In order to avoid errors due to the unequal distribution and opportunities of the older and newer stocks let us confine ourselves to the two older types of names. The main difference between Type I, bearing the names Trumbull, Coolidge, Huntington, Hooker, Lyman, and Van Dyke, and Type II, bearing the names Stone, Adams, Edwards, Brown, and Williams,

as has been pointed out several times, is that the first type is of almost pure colonial descent while the second, although containing a colonial section almost identical with that of the first, also contains a great number of persons of later origin. The following table shows the number of times by which the tendency to engage in each of the various activities or occupations is greater among persons of the first type than among those of the second. It should be noted that the figures here given are averages in which all persons of each type are lumped together. The first line in the table below means that a person who bears one of the distinctively colonial names either has, or has had 16.8 times as great a chance of being included in the Encyclopedia Britannica as has a person bearing a name of the second or more widespread and only partially colonial type, and so on. This is reduced to 15.3 where allowance is made for the changes in the proportional numbers of the two groups by reason of migration, but this does not alter the general aspect of the table.

Encyclopedia Brittanica	16.8	(15.3)
Notable Americans	10.5	(9.6)
Library cards	8.4	(7.8)
Authors	7.8	
Social Register	7.7	
American Association for the Advancement of Science	6.7	
Who's Who in America	6.3	
American Men of Science	4.9	
Directors	3.5	
Lawyers	3.0	
Physicians	2.1	
Patents	1.8	
Government Officials	1.6	
Dentists	1.5	
Business	1.3	

The tables presented up to this point seem to lead to four conclusions. First, the Huntingtons prove to be as fair a

sample of the old Puritan stock when we study merit as when we study occupations. Second, the older colonial stocks, and more specifically the Puritan stocks, play much more than their proportional part in almost every kind of leadership or constructive activity. Third, the more difficult the activity, the greater the extent to which these same stocks excel. Fourth, the families which excel in one line usually excel in others also. The truth of this last statement is evident from Dun's ratings as well as in the last table. Those ratings are omitted in the preceding table because they are calculated in a different way from the others.

Chapter IV

DEMERIT AND APPRAISAL

THE problem of unfavorable traits among families of different types is more difficult than that of either occupations or success. The best available tests of this appear to be the names on file in social service exchanges and police departments. The presence of a name in the files of a social service exchange usually, but not always, indicates some kind of social inadequacy, most commonly financial. The inadequacy may be purely accidental, or may be due to inefficiency, physical or mental weakness, or other personal traits. In any case it indicates that a family has not been able to carry on its own affairs satisfactorily. The presence of a name on the police lists, or more exactly those of a bureau of criminal identification, indicates either actual crime or strong suspicion thereof.

The rosters of social inadequacy and crime were unfortunately studied at an early stage when our list of names was limited to twelve, namely Coolidge, Huntington, and Lyman of the distinctively Puritan type; Adams, Brown, Edwards, and Williams of the more widespread English type; and Cohen, Larsen, O'Brien, Russo, and Wagner of the newer immigrant type. For each of these we ascertained the number of individuals on both the police lists and those of the Social Service Exchanges in New York, Chicago, Cleveland, St. Louis, Baltimore, Louisville, and Toledo. In Massachusetts, Indiana, and Michigan the lists of the State Bureaus of Criminal Identification were used, while the lists of the

Social Service Exchanges were those of the main cities, namely, Boston, Indianapolis, and Detroit. Social Service Exchange lists, but not those of criminals, were also utilized in Philadelphia, Washington, Cincinnati, and Nashville. Thus for a population of over sixteen million we have the full record of both delinquency and inadequacy for these twelve families, while for an additional three million we have the record of inadequacy.

The records of social inadequacy date from the early part of 1933, and represent the maximum expansion of such conditions. They include all persons who were registered by the Social Service Exchanges as far back as their records go. A few records in one city date back to 1880, but the main body of data seldom goes back more than ten years. No name is supposed to be repeated, but when a list covers a number of years there may be considerable duplication. Moreover, the exchange lists include transients or at least residents who stay only a year or two. Since the exchange lists are cumulative, it is not surprising that the names in them sometimes exceed those in the directories.

An important question in respect to both the social exchange lists and to a less degree the criminal lists is whether to compare them with the number of persons of the same name in the cities where they are listed or with the totals for the whole country. In order that the investigator may form his own opinion the figures according to both methods are given in Appendix G. Here the data based on the estimated numbers of persons of each name in the whole country are used. One reason for this is that social service exchange lists cover large suburban areas in addition to the city areas covered by the directories, while bureaus of criminal identification exchange data with one another far and wide. A second reason is that the poorer types of people both finan-

cially and morally tend to drift to the cities. This frees the country districts of people seeking financial relief as well as of criminals. Again, the people who live in the rural areas are much better able to meet hard times than are those in the cities because they have gardens, own their houses, and have kindly neighbors. This in turn reduces the tendency toward crime. Because of all this, if the inadequate and criminal groups are compared only with the people of their own immediate cities, the groups which are primarily urban, like the Russos, will appear to have no more than their fair share of such people, whereas those with a large non-urban contingent will appear far worse than they really are.

An incidental advantage of basing the index numbers for social inadequacy and crime on the whole country should not be overlooked. A high index number in this respect is unfavorable, whereas it was favorable in all our previous comparisons. Therefore, if injustice has been done because of errors in estimating the number of people who bear any particular name, that injustice is here reversed. A name which previously appeared less favorable than it really is will here appear more favorable. In spite of this, however, no appreciable change in the relative positions of the names appears. This in itself is strong evidence of the correctness and hence the fairness of the method here employed.

The final data as to social inadequacy are given in Table XVIII.

Two of the names of the distinctively Puritan type come in Group I and the third leads Group II. The partially Puritan old English names are divided between Groups II and III, but their index numbers are not far apart. The newer foreign names fall into three distinct groups. Larsen and Wagner stand on practically the same level as the other members of Group I and present a strong contrast to Cohen

and Russo at a level by themselves in Group III. O'Brien stands in the center with two old English names above it and two below. In the following data as to the three types of names the weighted averages for the two kinds of English names are significant, but the average for the newer names has little importance because based on such widely divergent types.

Distinctively Puritan names	115
Widespread English names	255
Newer non-English names	233

TABLE XVIII—ECONOMIC AND SOCIAL INADEQUACY

Persons on Social Service Exchange Lists of 14 large cities per 1000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Lyman	106	Coolidge	167	Brown	253
Huntington	108	Adams	225	Williams	275
Larsen	117	Edwards	227	Cohen	396
Wagner	128	O'Brien	239	Russo	627

The meaning of this is that the people who are mainly of old Puritan descent are only half as likely to be socially inadequate as are those of ordinary English descent. The latter, however, rank just about like the average of all the people with the newer non-English names, but among these newer stocks some rival the Puritan type while others are from two to six times as inadequate.

The last criterion of names is crime. The table as to this is based on the seven cities and three states mentioned on a previous page. It shows the number of persons registered by bureaus of criminal identification per 1000 adult men of the same name in the United States as a whole. A small

number is, of course, the best. No person is knowingly recorded twice in any one city, but the same person may appear in the lists of many states and cities.

In studying criminals the question of aliases must be considered. At any police headquarters the officials will say that criminals are far more likely to take names like Jack Brown than Reginald Coolidge. Of course this is true in the aggregate, but not when the aliases are compared with the number of inhabitants having any special name. For example, at the Michigan State Bureau of Criminal identification the 1244 cards which we examined as a sample in this respect showed the result given below. It happened that all the cards of Group II were those of women, but we know of no reason for supposing that the family names chosen by women as aliases are different from those chosen by men.

	Own name	*Alias*	*Aliases as per cent of true names*
I. Coolidge, Huntington, Lyman.....	26	17	65
II. Adams, Brown, Edwards, Williams.....	280	120	43
III. Cohen, Larson, O'Brien, Russo, Wagner..	639	162	25

If this table is typical of the whole country, as we believe it is, English names and especially the distinctively colonial names suffer from improper use more than do foreign names. In Table XIX, showing the registered criminals per 1000 adult men in the country as a whole, the numbers in parenthesis show the actual conditions based on all the cards in the files, and the others the conditions when allowance is made for aliases on the basis of the percentages given above.

The relative freedom from crime among the distinctively colonial names is evident. As to the relative merits of the other two types of names it is obvious that the widespread old English names here form the middle group, while the newer non-English names aside from Wagner form Group

III. Averaging the three types in the usual way, the figures are as follows, and need no further explanation:

Distinctively Puritan names	63 (104)
Widespread old English names	108 (154)
Newer non-English names	200 (250)

Having finished the comparison of names, we may now sum up the whole situation. It will be recalled that the names here used comprise representatives of three distinct types: (1) Old and relatively uncommon but fairly well known names whose bearers are largely of early colonial and

TABLE XIX—CRIMINALS

Persons recorded in Bureaus of Criminal Identification in seven cities and three states per 1000 adult men (over 25 years of age) of the same name in the United States, as estimated in Appendix G

GROUP I		GROUP II		GROUP III	
Huntington	43 (71)	Adams	105 (148)	Larsen	136 (169)
Lyman	70 (116)	Brown	107 (152)	Cohen	211 (265)
Coolidge	77 (126)	Edwards	108 (155)	O'Brien	244 (306)
Wagner	82 (105)	Williams	110 (157)	Russo	458 (574)

Puritan stock; (2) Old and very widely used English names which represent every stage of the migration from Europe to America, and are typical of the English stock in America as a whole. These people include not only groups of the distinctively colonial type but many groups of later origin whose ancestors came to America under far easier and less selective circumstances; (3) Recent non-English names as widely used as those of the second type and belonging to groups which came to America under the relatively easy conditions of the last one hundred years.

On comparing these three types according to nineteen different criteria, it appears that the first, or distinctively

colonial type, always stands well at the top. It contains a much higher percentage of professional men of all types; it includes a greater percentage of corporation directors and of executives who give their names to business concerns; the general ratings of the concerns with which these men are connected are higher than others; this type far excells the others in every measure of distinction; it shows less tendency toward economic inadequacy; and it has proportionally less criminals than the others. Its position is illustrated by the fact that table after table shows the names arranged in the same general order. For example, Group I consists entirely of distinctively colonial names in the tables of authors, scientists, notable Americans, library cards, *Who's Who*, the *Social Register*, the American Association for the Advancement of Science, and directors of corporations—eight cases in all. It contains only one name of any other type in the tables of doctors, government officials, patentees, the *Encyclopedia Britannica*, and freedom from crime—another five cases.

The second, or more widespread English type of names occupies an intermediate position in the tendency to enter professions, the management of business, the achievement of unusual success, and in freedom from crime. The same is true as to social adequacy, although the true state of affairs is here masked by the extraordinary variation in the newer non-English names. The five widespread old English names all occur in Group II in the tables for authors, scientists, patentees, notable Americans, library cards, *Who's Who*, the *Social Register*, the American Association for the Advancement of Science, corporation directors, and freedom from crime—ten tables out of nineteen. In four others one or two of the widespread names rise to Group I, but the rest are in Group II.

In every one of the nineteen tables the averages for the

distinctively Puritan names are higher, or at least more favorable, than those for the widespread old English names, and only in the tables for lawyers, business men, and social adequacy do the widespread English names fail to stand between the other two types. We have already seen that the contrast between the distinctively Puritan and widespread old English types increases in harmony with the difficulty of achieving the positions characteristic of the various tables. Thus the ratios showing the greater probability that a person with the more purely Puritan type of name will attain a certain position range from only 1.3 in the case of business men to 16.8 in that of the Encyclopedia. The tables in this chapter add ratios of 1.7 in the case of freedom from crime and 2.2 in that of social adequacy. These ratios are about like those for government officials, patentees, and physicians. The fact that the distinctively colonial type makes the better record when the two types of English names are compared in respect to social failures as well as successes indicates that the characteristic qualities of the two are very deep seated and pervasive.

The uniformity with which many of the names remain at the same general level is notable, as appears in the accompanying summary table. Omitting business on the ground both that among the occupations and activities listed in the foregoing tables, it is the easiest to enter, and that it obviously does not conform to the general rule, the names Trumbull, Hooker, Coolidge, and Huntington occur practically always among the first six (or the first four where there are only twelve). They fail to do this only once out of every ten chances. Lyman fails to be one of the first six only among the government officials, in the encyclopedia, and in Dun; Van Dyke fails only among the directors, lawyers, dentists, and patentees, and in Dun. Omitting still the

business table, Adams on the other hand, is among the first six only three times out of eighteen chances, Stone three times out of sixteen chances, and Edwards twice out of eighteen, but these names and likewise Brown never drop into the third group except that Edwards leads Group III among lawyers, while Brown falls to Group III in social adequacy. Williams, also, is always in Group II except in the case of lawyers, dentists, the encyclopedia, and social adequacy.

Among the non-English names Russo remains always in Group III except in business where it reaches the top of Group II. In the uniformity with which it maintains the same position this name is like Brown, although its position is practically always at the bottom instead of almost exactly in the middle. Flood and O'Brien hang together in their position in the tables, both being about equally divided between Groups II and III. On the other hand Cohen, Larsen, Levine, Schwartz, and Wagner are highly variable, each being found mainly in Group III, but four or five times in Group II, while each gets into Group I in certain cases, as may be seen in the summary table (Table XX). All this apparently indicates that the various names really have a significance as an indication of the general characteristics of the people who bear them. It also indicates that the Huntingtons, whom we are using as a yard stick in cases where we have not sufficient data about the others, form a random sample of the whole body of persons bearing the more distinctively colonial names.

Before the final implications of this study are discussed, the reader should again be reminded that the high stand of the distinctively Puritan type is real, and is not the result of selection for the purpose of proving any particular thesis. The selection was based solely on the number of people bearing each name, and on their type of descent, and not on

achievement. Coolidge, to be sure, was chosen because a man of this name had recently been president, but we did not

TABLE XX—SUMMARY TABLE

Showing rank of names according to 19 criteria

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	AUTHORS	SCIENTISTS	DOCTORS	LAWYERS	GOVERNMENT OFFICIALS	DENTISTS	PATENTS	BUSINESS	ENCYCLOPEDIA	NOTABLE AMERICANS	LIBRARY CARDS	WHO'S WHO	SOCIAL REGISTER	AMERICAN ASSSOCIATION FOR THE ADVANCEMENT OF SCIENCE	DIRECTORS	DIRECTORATES	DUN'S RATINGS	SOCIAL ADEQUACY	CRIME
Coolidge	1	1	2	1	4	4	2	16	3	4	4	1	1	5	2	2	16	7	3
Hooker	4	2	1	17	1	3	5	10	4	3	3	3	4	1	4	15	2	—	—
Huntington	2	4	3	10	2	1	2	11	2	2	2	2	2	3	1	6	6	2	1
Lyman	5	5	5	5	9	6	4	14	15	5	6	4	3	4	5	3	12	1	2
Trumbull	6	3	10	4	3	19	1	3	1	1	1	6	6	2	3	1	1	—	—
Van Dyke	3	6	4	9	5	11	18	8	5	6	5	5	5	6	6	13	19	—	—
Adams	7	9	8	11	7	7	12	9	6	8	7	8	8	9	8	4	4	8	7
Brown	9	11	11	13	10	12	9	12	12	11	12	11	11	11	10	12	7	14	8
Edwards	8	10	9	14	8	13	11	13	13	9	8	9	10	10	9	5	3	9	9
Stone	10	8	6	7	6	5	8	5	9	7	9	7	7	7	7	8	9	—	—
Williams	11	12	13	16	11	14	10	17	14	12	11	10	9	12	11	10	11	15	10
Cohen	13	14	14	2	17	8	15	2	8	19	14	17	16	14	16	9	15	16	15
Flood	12	17	16	12	15	10	16	19	7	10	16	13	12	18	15	11	8	—	—
Larsen	16	15	17	19	12	17	7	15	16	15	17	16	17	13	18	14	7	3	14
Levine	15	7	7	3	18	9	19	4	17	16	19	15	18	8	17	18	18	—	—
O'Brien	14	18	15	8	13	15	13	18	18	14	15	12	14	17	13	7	10	10	16
Russo	18	19	19	18	19	18	17	7	19	18	18	19	19	19	19	19	14	17	17
Schwartz	19	13	12	6	14	2	14	1	10	17	13	18	15	15	14	17	13	—	—
Wagner	17	16	18	15	16	16	6	6	11	13	10	14	13	16	12	16	5	4	4

consider either this name or Lyman, Hooker, Trumbull, and Huntington especially distinguished. In fact we supposed that the names Adams, Edwards, Williams, and Van Dyke

were more distinguished than these, and would rank correspondingly high when compared with other old colonial names. No one can be more surprised than we are at the consistent way in which the distinctively colonial names forge to the front in comparison with those which are only partially colonial.

The most important result that could come from this study of families would be a definite and convincing conclusion as to why the old colonial families stand so high. It is doubtful, however, whether any final statement along this line can as yet be made. The facts here presented do not show that either heredity or environment is the main factor. Indeed we are more and more convinced that any attempt to determine whether heredity or environment is more important *per se* is a waste of time and energy. Our own conviction, based upon evidence which cannot here be cited, is that while man's cultural position and achievements depend on the two primary factors of heredity and environment, the latter consists of two such distinct parts that it is wise to distinguish between physical environment and social environment.

To use a metaphor which we have employed elsewhere, heredity, physical environment, and social environment, are like air, water, and food. The condition of the human body at any given time depends upon the air, water, and food which have been taken into it. A man can kill himself by going either a few minutes without air, a few days without water, or a few weeks without food. At one time a breath of fresh air restores vigorous activity; at another time a draught of water; and at a third the right kind of food. We build warm houses, heat them with furnaces, and open or shut the windows in order that the air may be right. We construct wells, dams, reservoirs, and thousands of miles of pipe in order to have plenty of good water. We raise crops, pay

out good money, and spend weary hours in hot kitchens in order to have food. It is true that we devote more time and strength to preparing food than to preparing air or water. In the same way we spend more time on improving our cultural conditions than in improving our physical environment or our heredity. But this does not mean that any one of the three factors is more vital or essential than the other. Where three factors are so absolutely essential, it is useless to attempt to decide which is the more important. The only thing is to decide how each one works, and how the conditions of all three can be made most nearly ideal.

Looking at the matter in this way, it seems that the old colonial Puritan families have achieved a great deal for three chief reasons. In the first place, they happen to have lived for many hundred years in the very best parts of the world. England and New England stand close to the top from the standpoint of climates which are conducive to health and energy among people who have learned to protect themselves against cold weather. The United States is also supremely fortunate in its natural resources. Moreover, it has such vast unused areas that even now people still have plenty of elbow room, and there is little of the congestion which is so depressing even in France and Germany, to say nothing of Russia and China. If exactly these same people had been set down amid the steamy heat and fevers of the Amazon Basin or the Guinea coast of Africa, or among the dense tropical population of southern India, we do not believe for a moment that they could have risen to such prominent positions or been so obviously among the world's leaders.

The importance of this may be judged from what happened in the West Indies in contrast with New England. From 1620 to 1642, and especially from 1629 to 1642, the despotism of Charles I led to the main Puritan migration. During

those years 18,600 English colonists, mainly Puritans, migrated to Barbadoes, 18,000 to other parts of the West Indies, and 8000 or 9000 to other parts of America outside New England. Only 14,000 went to Massachusetts and 4,000 to the other New England states, mainly Connecticut. Yet the 36,600 who went to the West Indies have made almost no impression on the world's history, whereas the 18,000 who settled in southern New England have set their mark all over the world. This mark is found in the form of schools, colleges, machines, missionaries, political ideas, and a hundred other things. The West Indian colonists chose the wrong climate and failed. The New Englanders chose a climate which reinforced their innate abilities and supplied a great stimulus to new ideas and inventions as well as to industry and health.

The achievements of these New England Puritans depended not only on their physical environment, but on their biological selection, which means their heredity. Some people say that migration is not selective, but the evidence to the contrary seems overwhelming. The selection may, indeed, be either helpful or harmful. A call for Egyptian coolies to build a dam under the hot sun in Sudan may perhaps select a set of men who average lower than the ordinary Egyptian peasants both culturally and biologically. But a call to brave the dangers of ocean, forest, severe winters, and Indians in order to uphold the faith that is in them has a very different selective power. We do not propose to debate the question of how highly the Puritans were selected. The most successful and well established people of Old England did not migrate to New England. They were too well contented at home. On the other hand, it is a matter of history that the bulk of the New England Puritans came from the substantial families of East Anglia, the rich agricultural part

of England north of London. It is also a matter of history that this same region, for hundreds of years, has been the most fruitful source of the leaders who have kept England in the vanguard of progress. The New Englanders and these leaders sprang from the same general stock.

Then, too, it seems to us beyond question that the early settlers in America, and especially those who came for religious motives, had more than the usual share of courage, hardihood, adaptability, and spirit of adventure, or in a word, the pioneer spirit that H. J. Turner of Harvard University has so vividly described in his widely known writings. They were also characterized by an unusual degree of industry, foresight, and tenacity of purpose, which often became obstinacy. With all this went so high a degree of intellectuality that they thought for themselves and would not accept other people's opinions. In order to see this, one has only to read their early writings, such as the compact signed on the Mayflower, the records of such men as Governor Bradford, Governor Winthrop, and Winthrop's liberal rival, Sir Henry Vane. The same thing appears in the work of those two dissentient spirits, Anne Hutchinson and Roger Williams, the founder of Providence and leader of the American Quakers. One wonders whether it was mere chance that led less than one out of three of the Puritan emigrants to New England. Were those that went there of sterner stuff than those that went to the West Indies? They certainly went through a sterner selective process after reaching their new home.

One fact which is often overlooked in discussions of migration is that the character of future generations depends on the women even more than on the men. We hear it said, for example, that indentured servants and persons convicted of crime were sent to early America, including New England. But how many of those persons left children? The over-

whelming majority of them were men. Even among the free immigrants men were much more numerous than women. Moreover, because of the hard life many of the wives died young, and their husbands while still in the full vigor of life were seeking wives, as in the case of Miles Standish. Hence the rivalry for wives was very acute. Moreover, in those days parents had much more to say about marriage than they have today. The result was that an indentured servant, or a man convicted of crime had little chance of getting a wife and leaving children. The well established young widower, or the son of the well established first settler had a vastly better chance.

In addition to all this the deathrate in those early days was enormously high, and many people went back to the old country because they became discouraged. Half of the passengers in the Mayflower died within a year of the time she left England. Nine tenths of the settlers at Jamestown died or went home during the first two years. The weaker women died in great numbers in childbirth. The infants died at a very high rate. Each of these processes must have been to a certain degree selective. The weak and the ignorant had the highest deathrates, whereas the birthrate appears to have been equally high among all classes. Thus the mental and moral selection involved in becoming Puritans, suffering persecution, and crossing the ocean was supplemented by physical selection due to an extremely hard life where the deathrate was at first terrific. To this was added the further moral selection of deciding to remain in the new country even when life was hard.

The fact that there was relatively little migration to New England after 1642 and practically none during the eighteenth century is also highly important in this connection. It means that few except Puritans settled there. Biological selection such as we have just described is of relatively little

importance unless there is also some sort of segregation, so that the selected stock does not intermarry with unselected stock, or unless there is further selection to maintain the earlier standards. The segregation may be purely social, and may be accomplished by the rigid prevention of inter-class marriages. It may be purely physical, as in the case of remote islands. In New England both kinds of segregation took place, although neither was complete. Nevertheless, the number of new-comers after 1700 and the number of non-Puritans in earlier years was not large enough greatly to alter the character of the population. Only when manufacturing began to increase rapidly after 1830 did many immigrants of other types arrive. Before that the poverty of the soil of New England, as well as the broad stormy ocean, helped to keep people away after the first migration. Then, too, the comparative prosperity of England and the early growth of manufacturing there tended to keep the English at home. When oppressed or discontented people like the Scotch of Northern Ireland crossed the Atlantic, the more fertile soil and freer social system of regions like Pennsylvania drew them thither rather than to New England.

Another factor also fostered the segregation of the New England Puritans. In spite of their belief that all men were equal before God, the Puritans had a strong and healthy respect for social position and achievement. The bars against the marriage of Puritan girls with any except their own type were very strong. The young people had to marry the descendants of people who had been through the same process of selection that their own ancestors had been through. Inasmuch as this continued for close to two centuries, there was time for a distinct Puritan stock to develop. This stock appears to be what is represented in the families that we have selected as our distinctively Puritan group.

We do not believe that this is the only good stock in the

world, or the best among many good stocks. Indeed, we believe that from almost any reasonably good set of people a similarly fine stock might be developed. Its talents might be different, but that would be an advantage, for all sorts of abilities are needed. We have already said that the Puritan families bearing names like Adams, Brown, Edwards, Stone, and Williams are of the same type as the people named Lyman, Trumbull, Coolidge, and so forth. We also believe that the people bearing the names Wagner, Larson, Schwartz, Cohen, O'Brien, Flood, and Russo, as well as hundreds of others, include strains which are equal to those of old New England. All that is needed is a process of selection whereby these finer types with their diverse talents are segregated and then still further selected. If these families had come to New England three centuries ago as the result of an evolutionary process of selection, and if they had intermarried only among themselves, we see no reason why they might not now occupy a position like that held by the old colonial type. For all that we know to the contrary some future process of evolution may produce such a result.

In stressing thus the importance of heredity, as well as of physical environment, it may seem that we overlook the importance of social environment. This is not the case. Because we insist that a man who has long been suffocating in a hot cave needs air and water before he needs food, it does not mean that food is any less important. He may require both air and water immediately in order to sustain life, but in the long run he will certainly spend much more effort in getting food. A similar situation prevails as to physical environment, heredity, and social environment. No matter how important the others may be, they are of little use in maintaining civilization unless the utmost attention is given to the training of the children and the maintenance of the many institutions which interlock to form our cultural en-

vironment. We do not entertain the slightest doubt that a great deal of the present success of the old colonial families is due to the high moral and intellectual atmosphere which has long prevailed in homes where the Puritan tradition is still strong. The fact that a child is born in such a home means that from earliest childhood he is taught that there are certain things that people of high caliber either do, or refrain from doing. He inevitably comes to feel that such conduct pertains to a certain type of family which has high ideals. Children often say, "But why can't we do it? Everybody else does?" And the answer is, "Not everybody." Such children unconsciously but thoroughly imbibe the idea that money given to the Community Chest, for example, or used for a trip to Washington in the spring vacation is far better used than that which is spent on movies and sodas.

Such training makes all the difference between men and women with high ideals, eager purposes, and the spirit of social responsibility on the one hand, and those with selfish ideals, low purposes, and little feeling of public responsibility, on the other hand. Children brought up in this way and bearing the names of fathers who hold a respected position undoubtedly get much greater opportunities than fall to the lot of equally gifted children in less fortunate homes. We yield to none in our belief in the importance of training and opportunity. But what we add is that such training, such opportunities, and the achievements to which they lead are rarely found except in the better type of physical surroundings and in families with a fine biological inheritance. Good food is absolutely essential to health, but the best of food is of little use to a person who lives all the time in vitiated, hot air, and drinks vile polluted water. A family name, whether it be Chinese, Egyptian, French, or Puritan stands for an intimate mixture of the influences of physical environment, heredity, and social environment throughout long centuries.

Chapter V

THE HUNTINGTON FAMILY

THE preceding chapters make it clear that the Huntington family is a genuine sample of the old Puritan stock of New England both biologically and socially. A brief history of the family, then, will serve as a fair sample of what has happened to other New England families during the past three centuries. It will also lead to important suggestions concerning heredity, eugenics, and the social evolution of America. These in turn lead to certain phases of the philosophy of history which are not generally understood. One of these is the peculiar way in which the intellectual interests of the old New Englanders have changed, and yet have failed to follow the trend of the times in such matters as the exploitation of natural wealth. Another is the biological factor in present problems of crime and politics.

One of the first questions that many people ask about an old New England family is whether it was of noble ancestry before coming to America. In most cases the answer is much like that which we shall give for the Huntingtons. An oft repeated legend asserts that the family is descended from Robin Hood. This is more charming than factual. Robin Hood is certainly alleged to have been the Earl of Huntingdon, but as to whether the American Huntingtons were descended from him there is not the slightest evidence one way or the other. There are several alleged Huntington coats of arms, but to none of these have the American Huntingtons an undisputed claim. One is used in the memorial to General

Jedediah Huntington at Valley Forge. All that we know positively of the Simon Huntington who founded the family in America is his birth, marriage, children, and death. He was born in eastern England, probably near Norwich, in 1583; married Margaret Baret, who was probably his second wife, in 1627; started for America in 1633 with four sons and a daughter; and died of small pox before the ship reached Boston. Evidently he was a Puritan who had sufficient conviction, zeal, and determination to leave what was probably a comfortable home, and settle in a new and difficult land for the sake of his faith. He must have been of fairly good family and in comfortable circumstances, since his wife was the daughter of the Mayor of Norwich. Nevertheless, he may have been impelled by economic stress as much as by religion.

It seems to us that this account, meager as it is, just about represents the general position of the hundreds of Puritan emigrants to America from whom this family is descended. It is also typical of the status of the family ever since. As the junior author puts it, after delving into the affairs of the Huntington family for four years, although the name is not conspicuous, it is substantial and creditable. There seems to be a widely held belief that it is a business, professional, and social asset. Several cases are known where people have taken the name to help themselves along. A Jewish opera singer, for example, said that she called herself Huntington "because it helps you on the stage to have an aristocratic name." Her daughter, an art student, also uses the name. A woman in California wrote as follows in reply to our questionnaire:

"Unfortunately for me I cannot fill out the blanks for I am not a Huntington by birth. I have always admired what the name of Huntington stood for in the West, and when I decided to change my name I went to court, and after the usual proceeding of advertising my intentions, and a public hearing, was granted the name of Huntington."

It seems to us, also, that the use of Huntington as a middle name and for streets and towns is very prevalent. No less than three cities with populations of 13,000 to 75,000 are called Huntington, and the United States contains 20 smaller places of the same name. Such things indicate good repute.

We have said that this family is a fair sample of the Puritans, but the record of the early days, as given in the Genealogical Memoir, shows that then it was perhaps a little ahead of the average. At any rate it had an unusually large percentage of public officers, men who headed committees, and so forth. For example, we have some record of 30 men named Huntington who were born before 1700. Most of these were farmers, as were 90 per cent of the whole population, but many of them also carried on some other occupation. One was a clothier, another a surveyor, and others had mills or small businesses. Three were unmistakably business men, but several others combined business with farming. Only one, a physician, was a strictly professional man. This is perhaps surprising when we remember how largely the present descendants of the Puritans enter the professions. But in those days professional men were so scarce that one out of thirty is not a low record. The really noteworthy thing is the share which these men took in public affairs as represented by both church and state. No less than eight of the 30 were deacons. This is an extraordinary number when we remember that deacons usually served for life. The office of deacon meant far more then than now, and was conferred only after most careful thought and prayer. Beside the eight deacons a number of others are mentioned in the Genealogical Memoir as leaders in church affairs.

Civil positions were held in even greater numbers than religious positions. Here are some figures showing the chief civil offices held by the 30 men who were born before 1700; constables 2; town clerks 3; justices of the peace 2; judges 2;

townsmen or selectmen, that is, one of the three men composing the committee that ran the town affairs, 4; members of the lower house of the state legislature 7; and of the upper house 2. Of course, two or more of these offices were often held by one man. Even so, however, no less than 12 of the 30 are specifically stated to have held civil offices, while this is suggested by implication for at least three others. In addition to this these 30 Huntingtons included a lieutenant, a captain, a lieutenant colonel, and a colonel in the militia. At least ten were obviously leaders in their small communities, while six appear to have been among the larger land owners, and two were among the outstanding leaders of the Connecticut colony. On the other hand, at least six were so inconspicuous that we know practically nothing about them.

One of the original purposes of the study of the Huntington family was to find out whether such a group has any peculiar characteristics and if so what they are and how they are inherited. Our results seem to indicate that there are no discernible typical Huntington traits except perhaps the high order of efficiency in widely diverse fields which characterizes the Puritan stock as a whole. The Huntington family cannot point to any continuing line of prominent public men as can the widely known governmental branch of the Adams family. Nevertheless, a Huntington, who was later the governor of Connecticut, signed the Declaration of Independence, and was President of the Continental Congress. At least five others have been governors of states or else United States senators or congressmen, but interest in public affairs has not been maintained in recent generations.

The Huntingtons boast no line of military men, yet a single family furnished two generals, two lieutenant colonels, and a "comissary" during the Revolutionary war. General Jabez Huntington, the father of the other four, was one of the wealthiest merchants and ship owners of his time. As

the Revolution approached, but while the colonial cause looked hopeless, he called his older sons together. Shall we throw in our lot with the revolutionists and risk the loss of all our shipping and perhaps our whole fortune? Or shall we stick to the old allegiance and be safe? The unanimous answer was to risk everything for the colonial cause. The father was appointed major-general in charge of all the Connecticut militia. His eldest son, Jedediah, rose rapidly to the rank of brigadier-general and was much trusted and respected by Washington, on whose staff he served. One of the forts at Valley Forge was in his charge and bears his name. At the close of the war he received the brevet rank of major general. His advice was influential in causing the United States Military Academy to be established at West Point. He knew the beauties as well as the strategic value of the spot where the Academy now stands because it belonged to his second wife's uncle. His first wife was a sister of Trumbull, one of America's most famous painters. Another brother left Yale College without the permission of the faculty in order to enlist. He became a lieutenant-colonel during the revolution and a major general later.

In military affairs, just as in those of a political nature, a decline in interest, or else in the average ability of the Huntingtons, is manifest after the Revolution. This is clearly brought out by a comparison of the rank and number of the officers in the wars of the Revolution, of 1812, and of the Rebellion. In the Revolution the 35 Huntington soldiers of Connecticut alone supplied two generals, two lieutenant-colonels, two captains, two lieutenants, and a commissary or quartermaster, together with eight non-commissioned officers. In the War of 1812 the 20 Huntington soldiers from Connecticut supplied an adjutant general, an ensign, and eight non-commissioned officers. In the Rebellion, however, the 14 Connecticut Huntingtons had no officer except one

lieutenant, although they did furnish seven non-commissioned officers. In the entire Union army, however, no Huntington rose higher than major. This family did, to be sure, supply six captains, seven first lieutenants, five second lieutenants, two surgeons, and two chaplains,—23 officers in all, and 38 Huntingtons gave up their lives. Morever, at a later date one of the officers rose to the rank of brigadier-general and another to that of colonel of Marines. Nevertheless, when the proportion of officers among the Huntingtons is compared with the proportion in the armies as a whole a steady decline is seen in spite of the fact that General Grant was a Huntington by descent. The following figures make this evident. Unfortunately they are based on very small samples, mainly from Connecticut, but this is all for which exact information is available. Connecticut's records of its soldiers are especially good. Even in the "Roll of Honor," published by the national government and giving the names of the soldiers who died in the Rebellion, data are given as to the rank of only 27 of the 38 Huntingtons who were killed. The numbers given below show how many officers the Huntingtons furnished in comparison with those furnished by an equal number of the rest of the army.

	NUMBER OF HUNTINGTON SOLDIERS FOR WHOM EXACT FACTS ARE AVAILABLE	NUMBER OF HUNTINGTON OFFICERS FOR EVERY ONE THAT WOULD BE EXPECTED IF THE HUNTINGTONS HAD THE SAME PROPORTION AS THE REST OF THE ARMY	
		Commissioned officers	Commissioned and non-commissioned officers
Revolution	35	3.3	2.6
War of 1812	20	1.7	2.4
Rebellion	37	1.0	1.2

In a word the Huntingtons did about three times as well as other people in furnishing officers in the Revolution. In the War of 1812 they did twice as well, and in the Rebellion they appear to have behaved about like the average.

In art and in business the record is much the same as in political and military affairs. One or two men stand out conspicuously with a good many lesser lights around them. Daniel Huntington, born in 1816, is the outstanding artist. Many portraits painted by him hang in the Metropolitan Art Museum of New York.[1] Judging by the number of reference books in which his name is mentioned, he was one of the two most eminent Huntingtons. Today the work of a number of young artists and sculptors who belong to the Huntington family is receiving recognition. Quite a number of persons in this family have said to the Field Worker that the Huntingtons are "artistic." But an equal number have pointed out that the Huntingtons are "practical with good business sense, but no artistic ability."

Collis P. Huntington is the outstanding business man. His work in the development of the west is widely known. After building the Southern Pacific and the Chesapeake and Ohio railroads, he joined with Leland Stanford and Mark Hopkins to build the Central Pacific. He founded the cities of Newport News in Virginia, and Huntington in West Virginia. It is said that he was able to ride in his own private car over his own tracks from the gateway of the Old Dominion on the Atlantic at Newport News to the Golden Gate on the Pacific, a feat accomplished by no other man in America.

[1] He painted portraits of Abraham Lincoln, Martin Van Buren, Albert Gallatin, Generals Grant, Sherman and Sheridan, Admiral Dupont, Chancellor Ferris of New York University, Sir Chas. Eastlake, The Earl of Carlisle, James Lenox, William Cullen Bryant, John Sherman, Bishop A. C. Coxe. He was the third president of the National Academy of Design.

Associated with Collis P. Huntington was his nephew, Henry E. Huntington. Upon the death of his uncle he came into control of vast railroad interests and shared in a huge fortune. Both of these men were patrons of the arts. Part of their fortune was given by the nephew to the public in the form of the Huntington Memorial Library at Pasadena, California. This "priceless legacy to posterity," as the New York Times calls it, contains among other things the collection of books and objects of art gathered by Henry E. Huntington. The most famous book in the collection and one of the most valuable books in existence is the Gutenberg Bible. The two most famous pictures are Gainsborough's *The Blue Boy* and Sir Thomas Lawrence's *Pinkie*. Another part of Collis P. Huntington's fortune has been used by his adopted son, Archer M. Huntington, to endow such valuable institutions as the Hispanic Society and the American Geographical Society in New York. Many other Huntington business men have been conspicuous not only for their success, but for their gifts to public purposes.

The contributions of the Huntington family to religion have been made through a long line of prominent clergymen, bishops, and other leaders from colonial times down to the present. In the early days the affiliations were for the most part with the Congregational chuch and then with the Episcopal, but in later years there has been a great spreading into other denominations. In connection with religion it is interesting to note that Joseph Huntington, born in 1735, was long under a cloud because he would not believe that God condemns a large part of mankind to eternal punishment, while Dan Huntington, born in 1774, was conspicuous as a minister who became a Unitarian. A similar spirit was evident in William Huntington, born in 1784. He was a leader of the Mormons during their early trials and subse-

quent movement to the west. The Latter Day Saints Biographical Encyclopedia says of him, "His love and zeal for the cause were unsurpassed by any. His judgment was respected and his conduct never questioned." His seventh child and fourth daughter was a wife of Brigham Young.

A study of the Huntingtons who have distinguished themselves brings out some interesting facts not only as to the history of the family, but as to the general trends of history in the United States. In order to secure a list of the members of this family who have distinguished themselves we have consulted the reference books listed in the Appendix. There a brief statement is given as to each of 63 persons who are mentioned in these books. Since women who married Huntingtons are not Huntingtons by descent, they are omitted. It is interesting to note that one name, that of George Huntington, the physician who described the hereditary nature of the appalling but uncommon nervous disorder known as Huntington's chorea, is mentioned only in a German encyclopedia. He is one of three Huntingtons mentioned in that encyclopedia, and one of only six who are mentioned in any encyclopedia in a language other than English. This illustrates how different our judgment as to ourselves is from that of others.

As the years have gone on, the occupations in which the Huntingtons have distinguished themselves have changed notably. This is doubtless due more to the changing aspects of our civilization than to any change in the character of the Huntingtons. A man who would have been a liberal clergyman in the eighteenth century is likely to be an engineer or a professor today. Thus, the changes assume special interest as a reflection of the way in which similar abilities are moulded in different periods by the spirit of the times so that they follow quite diverse lines. In other words, the emphasis

here is upon social environment. The fifteen eminent Huntingtons born prior to 1790 were all interested primarily in public affairs or religion. Six were business men, engaged mainly in trade with the West Indies. They succeeded well in this and amassed fortunes which were large for those days. They also branched out into such incipient types of manufacturing as the establishment of a paper mill, which was quite a venture in those days. These things might have brought them into enduring prominence, but most of their reputation is due to the fact that they took a very active share in affairs of state and country, and were officers in the armies of the Revolution. Four others were lawyers who won repute serving as governors, judges, and members of Congress. In their case, too, fame came to them not because they were good lawyers, but because they were good public servants. Four others were clergymen, or at least religious leaders. Two of these owe their reputation mainly to the unusual quality of their preaching. A third, Joseph, born in 1735, was also a good preacher, but his fame rests on the fact that he was a liberal and almost a renegade according to the ideas of those days. He wrote a little book, published after his death, in which he set forth the doctrine that no one is condemned to permanent punishment, a doctrine which was later the foundation of the Universalist Church. So ashamed were his family of this doctrine that his daughter burned most of the copies of the book. The fourth of these religious leaders, William by name, appears to have been a farmer who went to western New York in 1804. There he became a Mormon and was a leader in the migrations of those persecuted people, but died before they left Missouri for Utah. Whether he was intellectually equal to the other men here discussed is not clear, but we have seen that he certainly possessed extraordinary zeal, and persistence, together with

high powers of organization and deep devotion to his people. Finally the last of these leaders in early days was a physician who owes his reputation largely to the fact that he is the last of the five Huntingtons who were members of Congress, including the Continental Congress.

A second group of eminent Huntingtons includes 23 persons who were born from 1791 to 1850. They represent the main activities of the nineteenth century. Judging by them, this was the day of the clergymen, for no less than ten were of this profession. This explains why many people, including the authors, were formerly under the false impression that the Huntington family has distinguished itself chiefly in religion. Six of these, however, were also educators, two being college presidents, and two bishops of the Episcopal Church. Another, Jedediah Vincent, the most famous, began life as a Unitarian minister, became an Episcopalian, and finally a Roman Catholic priest. He, as well as several other clergymen, distinguished himself as an author, writing poems, stories, and novels. Eight other eminent Huntingtons of this period were authors, and four of these were women. One of the women distinguished herself as a social reformer by starting the first American industrial school for girls, in New York. Another woman, Sarah Lanman Huntington, is not mentioned in the reference books, but almost certainly would have been if she had lived longer. She founded a school for Indians near Norwich in Connecticut, and later became a missionary, dying as a result of a shipwreck in Egypt. We hear about the opportunities for women at present, but in this family the women who have made a name for themselves belong mainly to the Victorian period when woman was supposed to be either a housewife and mother, a frail, drooping, ornamental vine, or a mere drudge.

The four men who are rated as authors in this nineteenth

century period were all of the journalistic type. Two of them lived for long periods in Paris. One became a major in the Civil War and later a Brigadier General. Among the remaining eight eminent Huntingtons born between 1790 and 1850 three were physicians, one being the discoverer of Huntington's chorea, as already noted. Another was a Canadian statesman and lawyer. He is sometimes said to have been descended from American loyalists who left New England during the Revolution because of devotion to Great Britain. This is a mistake, at least so far as his Huntington ancestors are concerned. Another eminent man of this period was the famous artist, Daniel Huntington, whose work has already been mentioned. The other three were business men. One of these, John by name, is the only distinguished Huntington, that is, the only one in our reference lists, who is positively known not to be descended from the New England Puritans. The ancestry of two others is not known with certainty, while one is an adopted son. The two business men who complete the roster for this middle period were the two railroad builders whose work in constructing Pacific railroads and utilities has been discussed on a previous page.

Turning now to the period since 1850, that is, to the men who have been active leaders since 1880 and especially in the present century, we find still another grouping of interests. Among the 24 born from 1851 to 1887 clergymen are not so prominent as among those of the preceding half century. There are only four of them. Two are of the old type, that is, men who owe their fame to their power of preaching. The other two display a new tendency which arises first to prominence in this later period. They have devoted their lives to religious work in foreign lands, China and Turkey. One is a missionary bishop who has spent much time translating books from English into Chinese. The other has devoted his whole

life to an American college in Turkey. Among the educators, who practically hold their own with five representatives, this same tendency toward a wider outlook is evident. One, a woman, made her reputation as head of an American college for girls in Spain, and belongs with the missionary group represented by the two preceding men. Two are geographers, one of whom has spent many years abroad. Another is a mathematician. That leaves only two who conform more or less closely to the old classical type of teacher.

Business, with eight representatives in this modern group, still holds its own just as in the two previous groups, but here too there is a decided change. The banker, the president of an insurance company, the corporation official, and the manufacturer who is also a chemist are new types. The railroad man is an executive, or engineer, rather than a builder and organizer. The industrial engineer has appeared on the field and perhaps may be counted with the business men. The civil engineer and the architect also illustrate the turning of the modern leaders toward the scientific aspects of life. The physicians, however, still make their reputations in the old way, by saving lives and discovering new ways of doing so. They, with a singer, the only other woman to distinguish herself among this later group, complete the list of Huntington leaders so far as they are mentioned in reference books. We believe, however, that a considerable number of equally able people have not been thus listed.

Let us now try to extract the philosophic core from the bare facts that have been sketched as to the changing interests of these leaders. In the first period, that is, until well after 1800, the chief avenue to fame, for these people at least, lay along the path of public service. This was preëminently true of lawyers and business men, and to a certain extent of clergymen and farmers. After the nineteenth century was

well under way and after the era of manufacturing and immigration had dawned, the Huntingtons seem to have lost all interest in public affairs. They produced no statesmen, except in Canada, and they distinguished themselves no more than the average in the Civil War, which suggests that they by no means used their full abilities. It is almost as if they had become disgusted with public affairs. Some turned their abilities to religion, some to writing, some to education, some to philanthropy, and a few to America's great business of developing its rich new domain. It is rather surprising, however, that so few turned to this, and so many to the more intellectual pursuits. In the latest period this intellectual tendency still persists. The business men are of course interested in making money, but they appear to be even more interested in the scientific analysis of the processes of manufacturing, buying, and selling, and in the engrossing problems of finding out how to manage new types of business. The educators tend to be scientists; engineers begin to play their part. Moreover, with this goes a pronounced tendency to be interested in other parts of the world. This began with the journalistic type of man with a fondness for European culture who found it pleasant to live in Paris, but now it expresses itself in missionary education, exploration, and the writing of geography. But nowhere in this modern group do we see any hint of a revival of interest in civic affairs. There are plenty of people who contribute to social welfare, giving both time and money to philanthropic and educational enterprises, but the lists of leaders in reference books do not show a single Huntington lawyer born since 1806, except in Canada, nor has anyone distinguished himself in political life since those born at still earlier dates.

This raises the question whether many of America's present ills may not be due to the failure of these old families to take

their fair share of responsibility for the state and for business, as well as for the church, the school, the home, and the institutions of literature, science, and art. We believe that this is undoubtedly the case. It is often said that the opportunities for wealth afforded by a vast new country of matchless resources have attracted the most able people, thus leaving politics to be managed by new-comers, or by persons of inferior character. Among the Huntingtons this is not true. A few of the leaders have helped to exploit our natural resources, but far more have turned away from the mere acquisition of wealth. In fact the great majority of the more able ones have deliberately chosen professions in which they could never hope for much more than a mere competence. We do not know whether this is because they lack the kind of ability which made General Jabez and his family wealthy, or whether it is due to a different use of such ability. Such a use may be due to love of intellectual activity, and perhaps to the feeling that such activity is of higher value than anything else.

The tendencies here set forth are curiously like those described by John T. Adams in *The Adams Family*. Most of the seven eminent leaders who are there analysed were indeed lawyers, but with them, as with the Huntingtons, there was a noteworthy tendency away from the kind of politics which leads men to scramble after office. Even the two presidents did not seek that high office. Ambitious, as they were, they let the office seek them. In later generations, the most distinguished scions of the Adams family turned wholly away from the rough and tumble aspects of politics. Nor did they show much tendency toward business and the exploitation of national wealth. Like the Huntingtons they displayed their talents largely in the more intellectual fields where they found reward in the satisfactions of

a life that was full and active both intellectually and socially. It seems probable that this same intellectual tendency has been characteristic of a large share of the descendants of the Puritans.

We wonder how much of this apparent turning away from both politics and business is due to a relative decline in the proportion of able men in the country as a whole.

In any social organism the positions most desired by people with the highest intellectual ability are few. If people with high ability are numerous, the most competent of them will generally occupy such positions, while the others will have to do something else and will thereby raise the standard of the other occupations. To be concrete, in our day, in spite of the lucrative nature of other occupations, a remarkably high percentage of the more intellectual Huntingtons choose to become college professors, writers, or physicians. We shall see later that the family as a whole is about eight times as likely to enter these professions as are the average citizens of the United States. The proportion who become lawyers or clergymen is only half as great, relatively speaking, while for business executives this is reduced to one fourth. It is the lawyers and business men, however, who have played the main part in the political life of the past. It may be that this gives a clue to one of the troubles of the United States. In the early days the families were so large, and the relative rate of survival so high among the upper classes that the proportion of people with high ability increased rapidly. Therefore there were plenty of able people not only for the relatively few positions as clergymen and physicians, which were then the most honored of the professions, but as lawyers and business men. Thus in this particular family these latter groups not only were much more numerous relatively than now, but contained a larger percentage of persons with

the kind of intellect, temperament, and training which lead to unselfish public service.

Whether this explanation is valid or not, there can be no question about the decline in the supply of the type of people best fitted to produce high minded leaders. A few facts as to our list of distinguished Huntingtons will illustrate the matter. Among the 16 men on this list who were born before 1810 every one was married, and all but two had children, 94 in all. The average number of children was 6.7 per father, and 5.8 per man, even if we include those who had no children. The deathrate among the children of people of this kind was not so high as is often supposed, and was probably lower than in less competent families. At any rate, 73 of these 94 children survived to the age of at least 25 years, and most of them had children of their own. The survivors who reached the age of marriage numbered 4.6 per man of the elder generation, even when the two men without children are included. Suppose, now, that the children of these men had married people similar to themselves and that the same rate of increase had continued down to the present day. Since the average date of birth of these men was 1767, over 1000 of their descendants, counting both male and female lines, would now be alive. If these maintained the level of achievement that might be expected from the actual performance of people of this type, they would supply over thirty men of a caliber to be in *Who's Who*.

What actually happened was quite different. After 1810 the birthrate among the more able people dropped with extraordinary rapidity. Among the 17 eminent Huntingtons born from 1810 to 1849 two women and one man were not married. Among those who were married four had no children and three had only one. Thus the total number of children was only 38, or an average of 2.2 per family. When

we eliminate those who died before the age of marriage this drops to 1.6. This is only a little more than a third as many as the 4.6 survivors per family among the same kind of people in the preceding half century. Among the 19 eminent men born from 1850 to 1880, the number of children per man drops still further, being only 1.6, while the number surviving to become fully adult bids fair to be 1.4, although it is too early for these later data to be complete. The contrast between the families of the earlier period and of the two later periods is truly appalling when we realize what it means. To understand the meaning recall that if the earlier rate of increase had persisted, the eminent persons of the eighteenth century would now have a thousand descendants. Look forward to the next chapter and see that the families which produced leaders in the past are to a high degree the ones that are producing them at present. Now see how many descendants the 16 eminent persons born before 1810 would have if among their descendants the birthrate had been that which actually prevailed among the eminent people born from 1810 to 1850. Instead of 1000 living descendants of the 16 eminent men of the period before 1810 we should have only about 33. These would presumably suffice to furnish one person of the caliber of *Who's Who* instead of the 30 postulated above. This seems incredible, but the facts are clear. Up to 1810 the old colonial stock increased very rapidly. Then, as we shall see more fully later, the rate of increase began to decline with great rapidity, and this decline took place first and most effectively in the upper classes. In other words, a century ago the supply of leaders was cut off in just about the way that the weeds are cut off when a cultivator is driven through the corn.

The reason for this decline is complex, but certain elements of it are evident. The rapid rate of increase in early days

was obtained only at a high cost. The women paid for it. Among the 16 eminent men born before 1810, eight were married twice, and one three times. In two cases the first wives survived to about the age of fifty, and the husbands married widows. The other six first wives and the second wife of the man who was married three times died at ages from 22 to 36, and their average age at death was approximately 28 years. These seven had a total of only 29 children, whereas the six second wives who were married young had 33 children, and lived to an average age of about 62 years. The point, however, is that in those days an appalling number of young women died during the period of child-bearing. This illustrates one of the reasons why thoughtful people became convinced that families were too large. Other circumstances such as the introduction of manufacturing and the rush of European immigration led to the same result. In the old colonial days large families were an asset, and there was land and opportunity right at home for everybody. But with increased immigration and the lessening of opportunities, the older stock restricted the size of its families in order to maintain its standard of living. Many circumstances made thoughtful people feel that for the sake of the children, as well as the mothers, something must be done to limit the size of families.

The people who reached this conclusion were the intellectual and moral aristocracy of America. With customary energy and thoroughness they suddenly put into practise a new method which promptly cut the families of this particular type to about one third their former size. Gradually this practise spread to lower groups, and it is still spreading. We shall return to it in a later chapter. Here the point is that the kind of people who had been furnishing the majority of leaders not only ceased to increase in number, but actually

began to decline. These people had been especially interested in public affairs and in the moral and religious condition of the community, and at the end of the eighteenth century they were leaders also in business. Then they began to become scarce.

In view of the rapid increase in the population as a whole, this meant a very large and most ominous decline in the percentage of the population formed by this particular type of people. As we have said elsewhere, it makes no difference whether we ascribe greater importance to training or inheritance. In either case it is hard to conceive of any deeper tragedy to a nation than such a sudden quenching of the fountain from which it has drawn the water of life in the form of the most able and altruistic persons. America's natural resources and the ease with which it has been possible to make fortunes have indeed diverted men's minds, and made dollars the shrine of millions of people. Yet the facts here set forth suggest that this has not been so largely true of the leaders descended from the Puritans as of many other groups. The Puritan descendants have perhaps turned toward religion, literature, and science far more than toward business and politics because there have not been enough of them to fill all of the positions in the upper intellectual levels.

This brings us back to the point where this discussion of birth rates arose. If the old Puritan stock had gone on increasing at the original rate, the United States would today contain a far larger proportion of able, high minded, well trained people than is actually the case. Only a small proportion of these could find places in the most intellectual occupations, as professors, authors, and physicians, which are now so attractive. There would be plenty of other able men not only for the more intellectual phases of business and for the law, but for leadership in such occupations as manu-

facturing, mining, trade, agriculture, and above all politics. If this had happened, it seems highly probable that our problems of economics, crime, morals, and social life in general would have been enormously mitigated or simplified. In other words we attribute the present evils of America only in part to material conditions such as natural resources, free land, the growth of manufacturing, and expansion along a frontier where the restraints of law were greatly reduced. Nor do we attribute the major share of our troubles to the kind of people who have composed our late immigration as contrasted to our earlier type, although this too has been important. Even more fundamental than these is the almost irreparable loss that we have suffered because during the past four generations the families most able to produce high-minded and competent leaders have been so drastically restricted that they have declined in numbers. In a well regulated society they would have increased at a more rapid rate than the population as a whole.

Chapter VI

EMINENCE AND ANCESTRY

THE question whether distinguished achievement is due to inherited ability or to training and opportunity arises directly from the preceding chapters. Our investigation of the Huntington family throws light upon it in connection with two oft repeated questions. The first is which line of descent has been most prolific of eminent persons. The second is whether eminence has persisted in the same lines or has shifted about. The answers to these questions lead to an investigation which in a small way is surprisingly like that described by Sir Francis Galton in his famous book on *Hereditary Genius*, but adds a new phase in an incipient study of inefficiency as well as efficiency. The first part of the investigation is based on all the persons named Huntington who are mentioned in the reference books listed in Appendix E so far as their ancestry is known. The second part is based on about the same number of persons who fall lowest in a classification which will be described later. Both the leaders and the unsuccessful or inefficient type have been divided into lines of descent based on the 33 great grandsons of the original Simon Huntington who died at sea. The number of men bearing the family name in the Huntington Genealogical Memoir has also been counted in each line of descent. Only those were counted who either had children or reached the age of forty years. On this basis it is easy to calculate how many eminent or unsuccessful persons each line of descent has produces per hundred men. A count was also made of the number of children born with the

name Huntington in each line after 1850, as given in the Genealogical Memoir.

The results of all this appear in Table XXI. In the first column it is incidentally of interest that every name but one (William) is of biblical origin. In column B it appears that although these 33 second cousins, all named Huntington, were born at various dates from 1676 to 1736, no less than 23 were born between 1690 and 1710. If there were as many descendants along the female lines as along the male lines, these 33 men must have had not only about 33 sisters, but 231 second cousins. Wherever they went they must have been among relatives.

The fertility of the various lines of descent in producing eminent men has varied greatly. Columns F and G show that 16 of the 33 great grandsons of the original Simon have had at least one descendant whose name appears in reference books. Seven others, although having at least a moderate number of descendants, have been the progenitors of no one who has become eminent, while the lines of 10 have practically died out. These columns also show that seven lines of descent have produced eminent descendants both before and after 1850. They account for 42 of the 59 persons here considered. They are evidently the lines in which high achievement has continued for a long time. Five other lines produced 11 eminent persons before 1850 but none since, while four have produced 5 since 1850 but none before. Sixteen of the 21 leaders born since 1850 belong to lines that were already distinguished. This confirms the now familiar conclusion that high achievement runs in families.

But how does the quality of the descendants compare with that of the progenitor with whom we start? The last column of the table shows whatever data are available in the Genealogical Memoir as to the social level and achievements of the 33 great grandsons. On this somewhat scanty basis we have

TABLE XXI

Eminence and ancestry in relation to 33 great grandsons of the original Huntington immigrant to America

A	B	C	D	E	F	G	H	I	J
			DESCENDANTS		EMINENT DESCENDANTS				
							Per 100		
NAME	BIRTH	INDEX	Adult males	Born after 1850	Born before 1850	Born after 1850	Adult males	Born after 1850	CHARACTER AS ILLUSTRATED IN HUNTINGTON GENEALOGICAL MEMOIR
Jabez	1736	1.3.3.4	18	11	4	0	22.2	—	Lawyer in front rank. Member Continental Congress and first U. S. Congress. Only man of his generation in list of emiment Huntingtons. 100
Joshua	1698	1.3.3.4	98	141	11	4	15.2	2.8	Very active business man. Wealthiest and most aristocratic family of Norwich..... 100
Samuel	1691	1.3.6.2	90	88	4	4	8.9	4.5	Deacon, an important office in those days..... 80
John	1709	1.2.4.10	57	138	3	1	7.0	0.7	Town officer..... 80
John	1706	1.3.6.7	31	39	2	0	6.5	—	No data except birth and marriage..... 20
Nathaniel	1691	1.3.4.2	114	152	5	2	5.3	1.4	Church member. Full family data..... 60
Isaac	1688	1.2.4.3	38	56	1	1	5.3	1.8	Town clerk, Committeemen. Sound and safe ecclesiastical adviser..... 80
John	1691	1.2.6.3	106	203	1	4	4.7	2.0	Lt. of militia. Church committee..... 80
Christopher	1686	1.2.4.2	79	103	2	1	3.8	1.0	Useful and consistent Christian..... 80
Thomas	1688	1.2.5.1	69	36	2	0	2.9	—	Active church member..... 80
Eleazer	1697	1.2.5.4	45	79	1	0	2.2	—	Full family record only..... 40
Ebenezer	1692	1.3.3.3	49	78	0	1	2.0	1.3	Deacon..... 80
Peter	1709	1.3.10.3	51	44	0	1	2.0	2.3	Lt. of militia..... 80
Matthew	1694	1.2.4.5	116	163	2	0	1.7	—	Full family data only..... 40
William	1676?	1.1.1.7	170	127	0	2	1.2	1.6	Married a Friend (Quaker)..... 60
James	1707	1.3.10.2	127	251	0	1	0.8	0.4	Full family data only..... 40

Solomon	1700	1.3.4.5	32	32	—	—	—	—	Frequently mentioned in town records	60
Daniel	1711	1.3.9.3	37	39	—	—	—	—	Considerable prominence, a scholar	80
David	1697	1.3.4.4	41	73	—	—	—	—	Apparently not a church member	20
Simon	1708	1.3.6.8	47	42	—	—	—	—	Mentioned in church records	40
Samuel	1708	1.1.1.8	48	19	—	—	—	—	Incomplete family data	20
Jeremiah	1715	1.2.4.12	51	40	—	—	—	—	Full family data only	40
Caleb	1794	1.3.6.3	226	271	—	—	—	—	No data except birth and marriage	20

Men of the fourth generation whose lines have practically died out

Hezekiah	1696	1.2.4.6	1	Member Conn. Council. Lt. Col. of militia. Prominent	100
Simon	1710	1.2.5.9	1	Full family record only	40
William	1705	1.2.5.7	1	Church member, record incomplete	40
Jabez	1691	1.2.4.4	4	Deputy to General Court. Colonel of militia, high rank among distinguished men	100
Thomas	?	1.4.1.1	2	No record	20
Jonathan	1719	1.3.9.5	4	Prominent in church. Chairman of building committee	80
Jonathan	1695	1.3.4.3	6	Member Connecticut Council. Chief judge. Physician	100
Simon	1696?	1.4.1.2	6	Record incomplete	20
Joseph	1688	1.3.4.1	7	Deacon, remarkable for great strength and agility	80
Nathaniel	1713	1.3.10.5	7	No data except birth and marriage	20

assigned a rank to each man. A rank of 100 means a man who was obviously of unusual attainments and influence, like a Congressman, a colonel of militia, and so on. A rank of 80 means a man who stood above the average so that he was appointed a deacon, a lieutenant of militia, or was accounted an "active church member." Men who get a rank of 60 are ordinary church members who were important enough so that a reasonably full record of their families is available. Dropping to 40 and then to 20 we have men who appear not to have been of much importance, or who were so inconspicuous or ignorant that their records are incomplete. Of course this is a very rough way of estimating people's worth, and if fuller data were available a good many changes might be necessary. Nevertheless, it is quite clear that a man whose date of birth and death are unknown and whose name cannot be found on any record, except perhaps in a will which gives his property to his children, cannot have been important. He certainly ranks nowhere near the one who was a member of the Connecticut Council, a physician, and also chief judge of the colony.

Even the few facts set forth in our table show a high degree of diversity in this group of 33 second cousins. In three generations after the arrival of their ancestors some had gone to the very top of the social scale and some had fallen well toward the bottom. There is, to be sure, no indication of any moral delinquency, and a man as to whom we have no record may have been an industrious farmer, good husband, kind father, and useful neighbor. Nevertheless, the degree of divergence is high. This suggests that ancestry along a single line of descent gives little indication as to a man's ability.

Almost the converse of this is also strongly indicated by the table. Compare the ranks given in Column J with the

figures in Columns H and I, showing the number of eminent descendants compared with other descendants. The comparison may be summed up by grouping the 33 progenitors according to their rank. Doing this we find a close correlation between the status of the progenitor and the number of eminent descendants not only before but after 1850. This appears in the following table where column A shows the number of eminent descendants born before 1850 per 100 adult male descendants of all generations, while column B shows the corresponding number of eminent descendants born since 1850 per 100 descendants of all kinds born in the same period. The significant feature is, of course, the regularity with which the index numbers decline as we go from the progenitors who were conspicuous leaders in early days to those who were inconspicuous.

	Index of eminent descendants	
	A	*B*
2 lines of descent from progenitors ranking 100.....	12.9	2.6
9 lines of descent from progenitors ranking 80.....	2.2	1.7
3 lines of descent from progenitors ranking 60.....	1.6	0.8
5 lines of descent from progenitors ranking 40.....	0.8	0.0
4 lines of descent from progenitors ranking 20.....	0.6	0.0

We can also turn the problem around and give the average rank of the 33 great grandsons when they are classified according to the number and date of birth of their eminent descendants.

	Average rank
6 with eminent descendants born both before and after 1850..	80
8 with greatest proportion of such descendants regardless of date.....	75
11 with such descendants born after 1850.....	71
12 with such descendants born before 1850.....	70
8 with lowest proportion of such descendants.....	63
7 with many descendants but none eminent.....	40

These little tables are very significant. They indicate that in general the families which stood highest two centuries ago have tended to produce eminent people at later periods. Omitting the ten great grandsons whose lines soon died out, we find that among the remaining 23 lines, one alone has produced more than a quarter of all the eminent men. It begins with Joshua, but centers around his son, General Jabez, who was described in the last chapter. Another, which stands third in the table and centers in Bishop Frederic Dan, has produced nearly 14 per cent of the eminent persons; four others another 32 per cent. These four others center in (1) Joseph, the liberal clergyman who was a brother of Samuel, the signer of the Declaration of Independence; (2) Daniel, the artist; (3) Daniel Trumbull, the missionary bishop; and (4) George, the descendant of a line of physicians, and the discoverer of the hereditary nature of mental diseases. The remaining 30 per cent of these Huntington leaders are derived from 10 other lines, while 7 lines produced no eminent persons whatever.

A complete study should include persons at the lower as well as the upper end of the scale. Accordingly we have looked up the ancestry of as many as possible of the persons to whom the Field Worker assigned the lowest ranks in the estimates of social level which will be described later. Unfortunately the descent of many of these is not known, but the facts are available for 65 out of 209. When these are compared with the total number of persons born since 1850 it appears that lines of descent which have never produced any eminent leaders are about fifty per cent more likely to produce persons who fall low in the social scale than are the others. The same general situation prevails even when we divide the lines producing eminent people into three groups, namely those producing such people before 1850, after 1850,

and in both periods. This becomes more significant when we remember that the ancestry of inefficient people belonging to lines containing eminent people is far more likely to be known than is that of inefficient persons belonging to lines which have never been conspicuous. Thus it appears that high achievement in some members of a given line is not counterbalanced by correspondingly low achievement in other members, as is sometimes supposed. On the contrary, so far as our data go, they suggest that where the upper level of achievement is high the lower level does not sink so low as in lines where there is less achievement.

This brings us squarely face to face with the problem of heredity and environment. Did the 33 great grandsons of Simon Huntington occupy such diverse positions in society because they were born with diverse abilities or because of different training and opportunities? It seems to us almost useless to debate this question any longer. No one can live long in this world without finding out that children differ in mental qualities from the day they are born. Nor can anyone fail to see that the brightest, keenest mind among the Pygmies in Central Africa has never produced a great book, simply because the necessary training and opportunity are both lacking. In the rest of this book we shall assume that inheritance and environment are two coördinate and complementary factors, both of which are always in operation and which are inextricably interwoven. We shall speak more of inheritance because the very nature of our topic leads in that direction, and also because it has been and still is far too much neglected. But this does not mean that we rate it as any more important than environment.

The part played by inheritance in producing eminent persons seems to be evident not only in the facts just stated as to the 33 lines of descent, but in the many cases where the

eminent persons listed in the Appendix are closely akin to one another. For example, among these 59 persons there are no less than 14 pairs in which one is the father and the other a son (or in one case a daughter). There are also 11 pairs of sibs, nine being brothers and two consisting of a brother and a sister. Pairs consisting of grandfather and grandson, or in one case a grand-daughter, are ten in number; pairs consisting of uncle, or in one case aunt, and nephew number 17. Out of the entire 59 eminent persons whose genealogical record is complete 37 fall in at least one of these groups of near relatives. In a few cases persons of only moderate eminence may be included among the 59 because they were close relatives of those of greater eminence, but such cases are rare. Moreover, even in them the persons thus included must at least rise well above the average in ability. Even when the fullest allowance is made for such cases, the number of near relatives is far greater than would result from mere accident. For instance, suppose the names of all the adult men, both living and dead, who are descended from the 33 great grandsons were put into a box and drawn at random in pairs. The number of such names of which we have a record is 1771, but the record is incomplete. We estimate that the true number is now about 3000.[1] Let us also assume that each father has had an average of 1.7 adult

[1] According to estimates previously given there are approximately 1350 adult men of Puritan Huntington descent in the United States at present. We start our calculation with the 33 great grandsons of the original immigrant. Let us assume that for three generations there was a uniform rate of increase such that each succeeding generation was 2.2 times as large as its predecessor, which is approximately the fact. Then let the rate drop to 2.0, 1.5, and 1.3, which is about what happened. That would give approximately the present number of adult men, and would mean a total of approximately 3000 when we eliminate the men now living who have not reached the age of 40 and have not yet had time to make reputations.

sons, which is approximately what the records show. In this case the chances that at any one drawing of two names those names would belong to a father and his son amount to one out of about 1760. In the case of the 55 eminent men of our list, however, omitting the four women, the chances are one out of four. This means that cases where fathers and their sons are included among the eminent men occur 440 times as frequently as would be expected on the basis of mere chance. In the case of brothers the chance that a pair will be drawn is less than in that of father and son, since only seven out of ten adult men have had adult brothers. Therefore the occurrence of nine cases among the 55 men is about 700 times as great as would be expected on the basis of mere chance. The 16 cases where uncle and nephew are included are also about 700 times as numerous as would be expected on the basis of mere chance, and the nine cases of grandfather and grandson are about 160 times what would be expected. On the whole these ratios are largest for very near relatives and diminish as the relationship becomes more distant. Brothers have precisely the same parents, and hence come as near as possible to having the same inheritance. Their occurrence in pairs among the eminent people is 700 times what would be expected from mere chance. Fathers have half the same ancestry as their sons, and the pairs consisting of a father and son are 440 times as many as would be expected on the basis of mere chance. Uncles, according to Pearson, should show the same correlation with their nephews as grandfathers with grandsons. Our data show that pairs consisting of uncle and nephew are 700 times as numerous as would be expected on the basis of mere chance, while the corresponding figure for grandfathers and grandsons is only 160. This is not a real discrepancy, however, for the figure for nephews is raised by a few exceptionally large early families, while that

for grandsons is lowered by the fact that most of the modern men who are mentioned in *Who's Who* are not yet old enough to have grandsons, or in many cases sons or even nephews, who have distinguished themselves.

When allowances for such conditions are made, two conclusions stand out conspicuously. First, the near relatives of leaders are hundreds of times more likely also to be leaders than are people in general. Second, the more nearly any person is related to an eminent leader, the more likely that person is to distinguish himself. These two conclusions harmonize completely with what Galton found in studying the really great men of all time. They add still another to the many convergent lines of evidence which demonstrate that mental traits are hereditary. Incidentally they also show what mongrels we are. A race of hunting dogs that bred no truer than do human beings would promptly be eliminated from all good kennels. In other words, there is plenty of truth in the old proverb that it takes only three generations to go from shirt sleeves to shirt sleeves, and yet it is also true that "blood will tell." The obvious conclusion is two-fold. First, even among such mongrels as the human race, good ancestry is as important as good training. Second, if we were not so poorly bred, we might have a vastly greater number of people with good minds and good dispositions, and thus a vastly better world.

This discussion of heredity seems to emphasize the importance of biological selection as a means of producing competent people. We have seen how widely a closely related group may spread in the social scale even in three generations. We have also seen how strongly the power of leadership tends to be concentrated in a few branches of this one family and how it persists there for generation after generation. These two diverse results are not antagonistic.

According to our interpretation they merely show the great importance of the selection of husbands or wives. It scarcely seems probable that descendants who are removed five generations from a distinguished ancestor owe much of their character to him. He supplies only one part out of 32 in their inheritance according to the usual way of reckoning, or perhaps nothing at all according to the Mendelian laws as previously explained. What they are most likely to owe to him is the fact that the qualities which made him distinguished helped him to get a wife whose qualities were also well above the average. Thanks to such parentage the children had a good inheritance and were well trained, so that they, too, in many cases secured husbands or wives of a fine type. It is probable that the choice of marriage partners is in the long run the dominant reason why some lines deteriorate while others consistently maintain a high level. Studies such as those of the royal families of Europe by Frederick Adams Woods have long made this clear. Nevertheless, the knowledge of this has not yet led to action. If there is anything which this country needs, it is a widespread movement to help the most able young people to marry in such a way as to insure the production of children who by both biological inheritance and early training will be competent to carry on the torch of leadership.

This study of inheritance also indicates that eminent people tend to belong to lines of descent that do not go to either extreme in the size of families. In order to discover the facts about this let us arrange our 33 lines according to the number of descendants. This is done in Table XXII based on the number of adult men in each line of descent from the time of the original 33 great grandsons down to the present. The 33 lines are arranged in order from the most to the least prolific. The single line of descent standing first

in the table has produced 226 adult men but none of these are mentioned in the reference books. The two lines of descent in the fourth line of the table have together produced 204 men, and claim 20 persons who are mentioned in the reference books. A curious feature of this table is the regularity with which the number of eminent persons per hundred adult men (the last column) rises steadily toward a maximum in the lines of descent of medium size, averaging about one

TABLE XXII

Eminent persons and size of families

NUMBER OF FAMILY LINES STARTING WITH GREAT-GRANDSONS OF SIMON NO. I	NUMBER OF ADULT MEN IN THESE LINES FROM BEGINNING ONWARD		TOTAL NUMBER OF EMINENT PERSONS	NUMBER OF EMINENT PERSONS PER 100 ADULT MEN
	Total	Average per line		
1	226	226	0	0.0
2	297	150	3	1.0
2	230	115	8	3.5
2	204	102	20	*9.8*
2	269	85	11	6.5
2	126	63	4	3.2
3	151	50	2	1.3
4	181	45	1	0.6
15	187	13	7	3.7
	1771			

hundred men, and then declines in similar fashion. The exceptional figures at the bottom of this column indicate that certain lines of descent, which were at one time highly productive of eminent men, have more or less died out.

A similar result is obtained when we compare the eminent men born since 1850 with the total number of children born during the same period and recorded in the Genealogical Memoir. (See Table XXIII.) Ten lines are omitted be-

cause they appear to be practically extinct. The two most prolific families have produced only one eminent person between them, but include 16 who fall in the two lowest ranks of the Field Worker's estimates. This makes only 0.2 eminent persons per hundred children as opposed to 3.1 unsuccessful persons. On the other hand the lines that had about a hundred children apiece from 1851 onward produced 1.7 leaders and only 2.2 unsuccessful persons per hundred children. With smaller families there is again a decline in the number of leaders and an increase in persons at the other

TABLE XXIII

Success and failure in comparison with rates of growth of population

A	B	C	D	E	F
NUMBER OF FAMILY LINES STARTING WITH GREAT-GRANDSONS OF SIMON NO. 1	NUMBER OF PERSONS BORN IN THESE LINES FROM 1851 TO 1912			NUMBER OF PERSONS PER 100 BORN AFTER 1850	
	All	Eminent	Unsuccessful	Eminent	Unsuccessful
2	522	1	16	0.2	3.1
3	518	5	15	1.0	2.9
3	406	7	9	1.7	2.2
4	348	6	8	1.7	2.3
11	431	2	16	0.5	3.7

end of the scale. Although the nine least prolific lines of descent that still survive produced 174 children and 12 unsuccessful persons, they did not produce a single person who is mentioned in the reference lists.

Tables XXII and XXIII seem to point to two significant conclusions. The first is that eminence is not commonly found in the type of families which go to either extreme in their rate of reproduction. In our own day we have abundant evidence that excessively large families tend to be of the less able kind. On the other hand, eminence is not found in

the families that have increased very slowly, although it does occur in some that soon die out. The trouble here is probably lack of physical vigor. The second conclusion reënforces what was said on a previous page as to the relation between success and failure. Although the evidence as to failures is neither abundant nor satisfactory, it points toward the conclusion that when a related group of people produces many leaders, the group is likely to be above the average in its general composition and to contain relatively few failures.

A final aspect of this study of inheritance shows how rapidly the quality of a population may change. In the following table the 33 lines of descent are arranged in groups of 4 (except in the last two cases) on the basis of the number of children born from 1850 onward. The first column shows the number of children and the second the percentage of the total.

4 most prolific lines	888	39.2%	63.9
4 next most prolific lines	558	24.7%	
4 next most prolific lines	348	15.4%	24.9
4 next most prolific lines	215	9.5%	
4 next most prolific lines	154	6.8%	10.8
4 next most prolific lines	91	4.0%	
2 next most prolific lines	8	0.4%	0.4
7 least prolific lines	0	0.0%	

This indicates that two thirds of the present Huntingtons are descended from only a quarter of the great grandsons who were born about 1700. Half of these great grandsons were the ancestors of nine tenths of the present people, whereas one fifth now have no descendants. This illustrates how rapidly racial characteristics may be altered. Suppose, for example, that in 1700 there had been a population in which one fourth were Negroes who reproduced at the rate of the first quarter in the preceding table, another quarter were

Chinese reproducing like the second quarter, a third Italians like the third quarter, and the rest Anglo-Saxons like the fourth. Today the Anglo-Saxons would be gone; the Italians would form only a tenth of the population; the Chinese would form a quarter just as at the start, and the remaining two thirds would be Negroes. It seems highly probable that such a change would be accompanied by very widespread cultural transformations.

Let us make another less drastic assumption—one that conforms more closely with the facts. Let us suppose that the cultural value of each of the 33 lines of Huntington descent is proportional to the number of eminent men that it has produced, except that those whose lines died out before there had been ten adult descendants are counted as average. On this basis the increase in the different lines has changed the capacity to produce eminent men only from 3.45 to 3.35 per 100 adults. The insignificance of this change is due to the fact that the lines most productive of eminent people have been moderately prolific, not standing at either extreme. But suppose the most prolific line had also been the one most productive of eminent men, the next most prolific had been next in productivity of eminence, and so on down to the lowest. In this case the number of eminent men per 100 adults would be 7.75, or more than twice as great as now. This would imply a corresponding rise in ability all along the line, with the elimination of a large share of the less competent and desirable elements. How this would change society is discussed in the last two chapters. No such change is immediately possible, but it represents an ideal which we may well investigate.

Chapter VII

GATHERING THE FACTS

HAVING seen how our chosen sample of old New England illustrates various important principles when studied historically, we are ready to see what it illustrates when its present situation is investigated. For this purpose we turn to the questionnaire sent out to all persons bearing the name Huntington. Before stating what the questionnaire discloses, however, it will be of interest to tell something of our methods of work. In using the questionnaire there were two main problems. The first was to discover the names and addresses of all the Huntingtons in the country; the other was to get them to answer questions. In solving the first problem we began with directories. Every city and county directory published in any part of the United States was scanned, and every occurrence of the name Huntington was noted in full. Generally the directories give the names, addresses, and occupations of all adults. In some cases the names of children are also given, and in others merely the number of children. A few directories omit wives. Such directories, however, cover only a small fraction of the counties in the United States. Those that we were able to consult include only about 9 per cent of the counties, but 46 per cent of the total population. Accordingly our next step was to ascertain for each state the title of the county or town officer—clerk, treasurer, or other—having the fullest list of voters, tax payers, or residents. In New England, town officers were substituted for those of the county because

there the township, locally called the "town", is the primary political unit and the county is of relatively little importance. We then sent to each such officer the following letter:

> I am making up a list of all persons in your state with the name HUNTINGTON. Will you please help me by listing below those with this name in your county, and returning this paper to me in the enclosed envelope.
>
> If you have no one there with this name please make a notation to that effect and return the paper just the same. Your coöperation will be greatly appreciated.

In three weeks stock was taken and the same letter marked *second request* was sent to each county which had not replied. In due time third requests were sent, and in some cases, where the coöperation seemed unduly poor, letters were sent to more than one officer. The replies to second and third requests were good or poor in practically the same proportions as to the first. On the whole the response was remarkably good and is a real tribute to the faithfulness with which our local officials attend to their duties. South Carolina, which almost rivalled West Virginia for first place in the percentage replying to the first letter, responded one hundred per cent to the second. It was the only state from which a reply was received from every county. Pennsylvania, on the contrary, began with the poorest showing. Even after four requests, directed to three different officers in the unresponding counties, three counties were never heard from. In Mississippi, which has fifteen more counties than Pennsylvania, eight never replied. On the whole the Northwest and New England make the best showing, and the South the worst. In the South, however, there is great diversity between Mississippi with the worst record and South Carolina and West Virginia which stand very high.

We do not know why some states were so much more

responsive than others. It may be that the dilatory ones impose more duties on their officers than do the others, or that the request arrived at a particularly busy season. Perhaps the method of filing county records is at fault, for it is much simpler to make up such a list from some records than from others. Some county officers said that such a list as we wanted could not be prepared from their files, but that they had gotten the information through other sources. One man put a notice in the paper asking for the names of all Huntingtons in the county. Several inquired from old residents, or at the post office. This helpful interest was in pleasant contrast to those who briefly replied, "Can't fool with such," "I have to draw a line somewhere," and "This is not one of the duties of this office." If a man was thoughtful enough to let us know that he could not send the information, even though as bluntly as in the examples given above, his county was credited with a reply. The personality of the officials seems to be the fundamental factor in producing good or poor responses, but why that should vary so much from state to state is not clear.

One minor result of our work was significant, although not surprising. At the beginning, in order to determine the best method of procedure, we tried an experiment in four states. In the letters to about half of the county officials we enclosed stamped and addressed envelopes for reply; in the other half we enclosed addressed envelopes but did not put on any stamps. In each state the percentage replying with the stamped envelopes was decidedly the larger, but differences from state to state were surprising, as appears in the last two columns of Table XXIV. Connecticut replied only 16 per cent better with the stamp, while West Virginia replied 74 per cent better.

The character of the replies from the county officers was

interesting. The majority merely said "none," or listed some Huntingtons without giving the sources of information. This was entirely adequate. Others, however, went into more detail; for example, "In the 24 years service as Town Clerk going over the records for various matters, I have never run across the name Huntington." Another says, "I have searched the tax lists and voting lists and all other records found in this office, and the following are the only Huntingtons I could find." A clerk in Florida answers, "in Reply to your Letter will say I don't no any Huntingtons at all in my Co. would be glad to give you the information if I new any

TABLE XXIV

	NUMBER OF LETTERS		PERCENTAGES OF REPLIES	
	With stamped envelopes	With unstamped envelopes	Stamped envelopes	Unstamped envelopes
Connecticut	54	96	83	67
Illinois	51	51	73	37
Oklahoma	38	38	87	42
West Virginia	28	27	96	22

one by that name." From Mississippi: "Dear Madam; I am enclosing list of Huntington's as you request. Any other information you desired will be glad to furnish if I can. Yours truly, B. D. Anderson, age 86 yrs." Such replies were not only convincing, but gave a strong impression of the conscientious and painstaking character of a great many public officials.

Some replies were not so pleasant. The most aggravating, although very few in number, were those that said they had Huntingtons, but did not have time to look them up. This reply came from Georgia, "There are probably many Hunt-

ingtons in this City and County, but we haven't anyone in this office who has the time to get up this information for you."

A man in Indiana wrote, "We have not had the time to make such search as other things pertaining to the office is more important." From Louisiana, "I don't no of any."

Connecticut—"The least your outfit could do would be to insert a stamped addressed envelope with each inquiry."

Illinois—"I can find nothing in the Law that requires us to make a service of this kind."

Considering the amount of work involved, it is remarkable that so few asked for fees—only seventeen—and several of these sent the information with the bill. The fees requested ranged from that of the Illinois clerk who wanted $10.00 to those of the California and Connecticut clerks who asked 50 cents. The latter justified his claim with, "I have to live same as you."

Some got the name completely wrong, although the replies were written on the letter making the request. Replies from two different Kansas counties were: "We know of no one in this county by the name of Hungerford"; "There is only one Huffington in this county and that is R. D. Huffington." Another, being confused by the name of the field worker who signed the request, replied, "No tax payers in this county by the name of Ragsdale." A number of others offered information about the Ragsdales.

Then there was the opportunist from Alabama who said, "None in this county. I wonder if you are married? Write me again some time. A new friend." And the jokers (we hope) who wrote, "The last one left to be hanged" (Pennsylvania), and "The only one ever here was jailed for bootlegging" (Ohio). But here is one from Montana that sounds serious: "The only Huntington we have record of in this

County was a man of this name who lived at Kirby, Montana. Who later worked on the Govt. Ditch near St. Xavier, Mont., but later our information is that while trailing out of the County to other work in the vicinity of Hamilton, he killed his partner for his money and was afterward hung for his deed."

Humor, either conscious or unconscious pervades a number of replies:

North Carolina—"In reply to your inquiry, I will say that there are no Huntingtons in this neck of the woods. I know that it is our misfortune but nevertheless true. Happily,"

Oklahoma—"we have no Huntingtons in this county. Latimer County is lacking several different ways."

Tennessee—"I am just in receipt of yours of today in the inquire of the Huntington people, am more than pleased to give you the information that thier issent any paople in this County by the name and never has been according to the reccords I have given a compleat serch."

California—" . . . The Huntington family evidently do not know what a wonderful county we have here, not to have at least one representative here."

Minnesota—"There is nothing like this in this county. We have no closed season on them here, but we never heard of one being killed, trapped or captured."

Eight county officers asked for counter information about their families, or for directions as to how to get such information, or how to organize a Family Association. Quite a number included a little propaganda in their replies. California and Colorado were particularly prone to insert folders and illustrated booklets extolling the virtues of their states. The official letterhead of a clerk in Illinois bears this inscription: "This paper is made from Cornstalks grown in the Corn Belt."

Having obtained all possible information from directories and county officials we still had no information as to hundreds of counties. For these we turned as a last resource to the United States Census. In view of the nature of our investigation and the expressed interest of the National Research Council, a sworn census worker was allowed to run through the lists of names in each county for which we had no information, and inform us whether any Huntingtons were listed there. Under the law, the census returns are confidential, hence names or addresses were not supplied, but merely the number of individuals with the name Huntington recorded in each county. We then redoubled our efforts to get specific information from whatever counties were thus indicated. In a good many cases, however, we still know merely that the census contains the names of a certain number of families.

In pursuit of the second portion of our task we began, as has already been said, with voluminous questionnaires, but finally relied mainly on a brief letter which is reproduced in Appendix F. This was followed where necessary by a follow-up letter which is also given in the Appendix. The replies to these letters were far less complete than to those sent to the county officials. This is to be expected, for these letters went to all sorts of people some of whom are not in the habit of getting letters. Some of our letters came back, because people had died or moved away without leaving addresses. The final percentages of replies varied greatly from state to state, but for the whole country the number of replies amounted to 45 per cent of the letters originally sent out. As such things go, this is very good. Table XXV gives the number and percentage of responses sent by the Huntingtons to whom we *originally* sent questionnaires. The first column shows the number of *persons* to whom letters were sent, re-

gardless of whether it was necessary to send one letter or three. At a later stage letters were also sent to many people—mainly wives and children—whose names were found on returned questionnaires. The records of these were kept in a different way from the others and do not lend themselves to use in this table, but there seems to be no reason to think that they would show anything different. In New York City and its suburbs, including those in New Jersey, the per cent of replies shown in the table is increased by the

TABLE XXV—REPLIES TO HUNTINGTON QUESTIONNAIRES

	PERSONS TO WHOM LETTERS WERE FIRST SENT	REPLIES	PER CENT
Middle Atlantic States	435	265	60.9
New England	404	214	53.0
South Atlantic States	118	58	49.2
East North Central States	465	207	44.5
West South Central States	105	44	41.9
Pacific States	457	167	36.5
West North Central States	236	76	32.2
East South Central States	36	11	30.6
Mountain States	142	43	30.3
Total	2398	1085	45.2

fact that there the field worker went in person to get information. Had it not been for this the Middle Atlantic States would probably not stand any higher than New England.

The final result is that we have at least a little information about 3717 people bearing the name Huntington. They are divided into the following groups:

Married men (living)	973
Married men (deceased, reported by wives)	94
Wives (living)	1009

Wives (deceased)	36
Single men	532
Single women	362
Children	647

The number of children is certainly far too small, for among the people known from all sources except the questionnaires we have no information as to children. If the ratio of persons under 21 years of age to adults is the same among the Huntingtons as among the entire native white population of native parentage, namely 45.7 per cent, as must be approximately the case, the entire number of living persons bearing the name Huntington must be about 5400. This is a little less than our previous estimate of 5500 made in the first chapter by a different method, but the difference is not great enough to be significant. For some of these we know only the residence, and for others the residence and occupation, but for approximately 666 married men and their wives, 150 single men, 170 single women, and 647 children we have fairly full information from questionnaires. These are the main basis of the results set forth in the Appendix and summarized in the next chapter.

According to our field worker the Huntingtons whom she interviewed almost always showed a certain family consciousness. The exceptions were always among the lowest strata where the name carried no connotation beyond being their own family name. Usually the person interviewed would talk of the "Huntington family," meaning all descendants of the colonial ancestors in the whole United States. There seems to be a widespread feeling of unity carrying with it a pride in the name. Not infrequently, however, some one would make fun of the investigation here described and act as if such an interest in the name were a big joke. Such people were by no means the ones with the least knowledge of the

name, for while they were speaking jokingly and disparagingly of "the rich Huntingtons," "the prominent Huntingtons," they took pains to bring in their own relationship to these same "rich and prominent" people, a relationship of which they thought very little, so they said. It is probable that these people have an especially acute family consciousness. Many who displayed great interest in their ancestry had very deficient knowledge of it. Five replies claim direct descent from Samuel Huntington, the signer of the Declaration of Independence. Such people are presumably, *collateral* descendants of this distinguished gentleman, who, though married, had no children. It is perhaps remarkable that there were not more who erred in claiming this direct relationship.

Among those replying to the questionnaire a large percentage added extra notes and comments. Many of these were personal, as in the case of a man, well able to afford several cars, who said of automobiles, "Don't need one. Don't like them." Another has received a Carnegie Medal and wonders how many others have one. A third gives a toot on his own horn, very loud and shrill. Some comments express interest in the study, others disapproval. Some of the strongest expressions of approval come from wives whose husbands neglected to coöperate. One wife, who carefully filled in the questionnaire, had this to say, "Of course I am only related to the Huntingtons because I married one. I am very much interested in the family research and my husband is not, but perhaps I can get him to coöperate if we can be of any further assistance." Another wife wrote as follows: "When reading of those who have really achieved fame and honored the name, it causes one like myself to feel like the fruit of a wild gourd vine entangled in the boughs of the old family tree. But it seems the wisdom of God has equally

distributed fame among the families of the Earth and we who are mediocre have much of which to be proud."

As a balance to this we may quote a man who wrote curtly, "Be good enough to remove my name from the membership list of the Huntington Family Association." Or again, "I am not interested in literature that you are going to try to sell me at a later date." Several asked help in locating members of their families from whom nothing had been heard for 10, 20, or 30 years. Others wanted us to trace their ancestry for them. Glad as we should have been to comply with these requests, there was neither time nor money for such work.

The following was perhaps the most illiterate letter that we received, but it displays a commendable degree of caution as well as a desire for information and a willingness to co-operate.

I just rec your letter Baearing papers. Asking me to sine them. and also My wife —— ——. I do not quit understand the mening of these papers which I ask you kindly inform me what these papers may contane. I do not say that I will not sign these Dockmentes as I do not understand for what reaison or cause that you send me these papers. But hoping to hear from you on return mail. I remain yours truly. As your letter States what my possion [position] is as the Liberty Gosple Home work.

At the other extreme from this stand a number of people near the top of the social scale who were unwilling to assist our investigation. The truly representative people, however, are a great body of college or high school graduates who occupy useful but not conspicuous positions. They were interested in this investigation both because it belongs to their family and because it promised worth while results.

Chapter VIII

THE FRUIT OF MANY QUESTIONS

THIS chapter contains a summary of the facts derived from the inquiry described in the preceding chapter. The reader who does not enjoy statistics can skip it. The data here presented form an essential part of the facts used elsewhere in this book, but it is very difficult to state them interestingly. The statistics are given fully and explained in Appendices A to D. Here the facts are stated categorically and with little attention to the exceptions or alternative interpretations set forth in the Appendix.

The migrations of the Huntingtons furnish an illustration of the general geographical law that migrations are selective. In other words they show that on an average there is a distinct difference between the people who migrate and those who stay at home. From 1633 onward the family which provides our laboratory material, so to speak, has always been prone to migrate and has been numerous on the frontier. Today some of its members are found in every state of the Union, as appears in Figure 1. There each small dot indicates one, each open circle five, and each large dot ten of the 3717 Huntingtons (including 1009 wives) whose residences were known in 1932. The data show that today a quarter of the adults (27 per cent) live in the East Coast Industrial Section from Portland, Maine, to Washington, D. C., while an equal number live in the North Central or Middle Western States from Ohio to Kansas and North Dakota. The North Appalachian Section including northern New England,



FIG. 1. THE DISTRIBUTION OF PER

• One person ○ Five



Persons Named Huntington

ersons ● Ten persons

northern New York, and Pennsylvania west of Harrisburg, is the home of 20 per cent; the Pacific coast of 15 per cent; the South of 6 per cent; and the Rocky Mountain States of 4 per cent. Naturally the dots are concentrated in certain centers where one or more families settled at various times. The concentration is greatest in the three southern states of New England, where most of the Huntingtons live in cities, and in the immediate vicinity of the cities of New York and Los Angeles. Next to these in importance come the urban concentrations in or around San Francisco, Chicago, Washington, Cleveland, Detroit, and Portland, Oregon. A great many rural Huntingtons are found in the northern sections of New England and New York, and in Pennsylvania, southern Indiana, Utah, and western Oregon. If the distribution of all persons of relatively pure New England stock could be similarly mapped, the number of blank spaces would of course be far less than in Figure 1, but there would doubtless still be centers of aggregation such as Los Angeles, San Francisco, and the city of Washington.

In spite of these centers of aggregation, the most noteworthy fact about Figure 1 is the high degree to which this sample of New England has spread into all parts of the country, including even the South. There, to be sure, a few people who bear the name Huntington in Alabama are colored, and we do not know whether the name really belongs to them. Such cases, however, form scarcely a quarter of one per cent of the total, and have no influence on the general distribution. The number of Huntingtons compared with the general population ranges from 195.0 per million persons in Vermont and over 100 in Maine, Utah, and Oregon to 2.7 in Tennessee and less than 5 in North Carolina, Kentucky, and Louisiana. This contrast is perhaps less significant than is the relative uniformity implied by the fact that more

than half the states contain from 10 to 52 Huntingtons for every million inhabitants. If data for all persons of New England descent were available, the degree of uniformity in their distribution would undoubtedly be far greater than for this small group. Apparently the old New England stock tends to distribute itself among the other people of the country much more evenly than do such groups as the Negroes, the Pennsylvania Dutch, or even the more recent immigrants from Europe.

The geographical spreading of the old New England stock appears to have been accompanied by a decided tendency to break up into groups of distinctly diverse quality. A conspicuous example of this is evident in the people of New England extraction who live abroad. Unfortunately we have no exact facts about this group even among the Huntingtons, but we know in general that two things are true of them. First, their number is large compared with the similar number among other elements of the population. Second, those who live abroad stand unusually high in intelligence, economic position, and moral earnestness. The basis for this statement will be clear when it is remembered that they consist largely of business executives, government officials, persons of means who prefer to live abroad, students and investigators of many kinds, authors, missionaries, and Y. M. C. A. secretaries. This is one of the many illustrations of the fact that migration tends to exert a selective influence. In general those who migrate long distances or to decidedly new conditions include an unusually high percentage of persons with more than average ability.

Our Field Worker's estimates indicate that this generalization also holds true within the United States. In order to classify people according to their sociological level the Field Worker assigned to each person a rank ranging from five at

the top down to one at the bottom. Education plays the greatest part in determining the rank, but other conditions were taken into account so far as they were known. A rank of five means a person of outstanding ability and achievement, who is usually, although not necessarily, a college graduate. A rank of four means well above the average; three average; and two distinctly below the average. A rank of one is reserved for persons whose education, occupation, and other characteristics indicate a decidedly low position in the social scale. This classification is undoubtedly rough, and takes no account of moral character. It does, however, indicate the combined results of innate ability and social environment in giving people a high or low position in the scale of achievement and influence. Moreover, it agrees with other tests, thus indicating that when groups of people are separated in this way the distinction between them is sound. The Field Worker's estimates (Appendix A, Tables 1 and 2) make it possible to compare the quality of the people who have migrated into each main geographical section with that of the ones who have gone away. On this basis the Pacific Coast and the Rocky Mountain States have been the gainers during the past generation; the East Coast Industrial Section and the North Central States strike an almost even balance between gain and loss; and the South and the northern Appalachian Section have suffered a decided loss. This not only bears out the preceding generalization as to the selective power of migration, but agrees with the familiar conclusion that the drift toward the eastern cities and the far West has led many people of more than average ability to leave the South and the rural parts of the East. The Field Worker's estimates indicate that among the small group of people here dealt with the gain thus accruing to the East Coast Industrial Section and to the industrial

section of the Middle West has been just about balanced by the loss which those regions have experienced because of the attraction of the far West.

This does not mean that our sample of old New England ranks higher in the West than in the East. Although the West has of late been the gainer, the average level of all the people for whom we have data is a trifle higher in the East Coast Industrial Section than on the Pacific Coast, but the difference is too slight to be significant. Distinctly below these sections, and not differing much from one another, come the Middle West and the South. Lowest of all, and again not far apart, come the Rocky Mountain States and the northern Appalachian section.

This means that the net result of all the migrations of the past century or more, and of the social systems which have grown up in various parts of the country, is that among these typical people of old New England stock there is a strong tendency toward concentration of successful people near the two coasts, especially the northern half of the east coast and the southern half of the west coast. There is an equally strong tendency toward the concentration of less successful types in the two main mountain areas of the country, namely, the Appalachians and the region from the Rocky Mountains to the Sierra Nevada. This does not contradict what was said before as to the recent gain of the Rocky Mountain States. The general level there is such that a moderate gain in the quality of the people by means of recent migration is not enough to raise the average level even to that of the northern Appalachian section. Of course the number of people concerned in this study is too small to warrant any positive conclusions, as is clear in Appendix A. Nevertheless, in respect to the selective power of migration, as in many other respects, the sample appears to indicate trends

which are characteristic of the whole body of people of early New England descent.

One of the most notable facts about the sample family here discussed is the rapidity with which it is becoming urbanized. Two thirds of all the adults born in rural sections and four fifths of those born in villages of 1000 to 2500 now live outside the county of their birth (Appendix A, Table 3). In larger or more favored places the tendency to migrate diminishes steadily as the size of the birthplace increases, the percentage living outside the county of their birth being 55 among persons born in cities of over 100,000, and 43 among those born in the suburbs of the great metropolitan areas. Even these latter figures indicate an extremely migratory type of people. The secret of the excessive migration away from the farms, villages, and smaller cities lies, of course, in the opportunities offered by the larger communities to people among whom graduates of high schools and colleges are very numerous. The chances for such people to find work near home are at a minimum in the small villages, being even less there than on the farms. In the larger cities the chances increase, so that there is less incentive to go away. Suburbanites feel still less incentive to migration, for they frequently belong to well established families which help the young people to find work at home. Thus there is coming to be a reversal of the old conditions under which the farm was the place where family life was most likely to be permanent. Among the type of people here discussed the comfortable home in the outskirts or suburbs of a large city rather than the old farm is fast becoming the place where sons and daughters, children and grandchildren, gather for Thanksgiving or Christmas.

Although those of our sample family who are born in villages and on farms are especially likely to move away from

their old homes, they do not migrate so far as do those born in larger places. Among the people for whom we have data two thirds of the adults born in the rural districts have migrated away from the county of their birth, but only one sixth have gone beyond the limits of their own or an adjacent state. The number who migrate to non-adjacent states, however, increases with the size of the birthplace until it includes more than a third of those born in cities of 10,000 to 100,000. In these larger places the greater educational opportunities of the young people, their greater sophistication and financial ability, and possibly their innate mental qualities tend to make them take long jumps to the places of their life work. In the largest cities, however, this tendency is checked, presumably by the fact that ambitious young people there find great opportunities close to their homes. Among those born in the suburbs the tendency to settle in places far from home appears to be checked still more, for only 11 per cent of the 44 persons for whom we have data have moved to a non-adjacent state.

The social contrasts between the people of old New England stock in communities of various sizes are far greater than between those in different geographical sections. The Field Worker's estimates rise steadily in harmony with the size of the communities where people live, provided we count the suburbs of large cities as representing the greatest urbanization (Appendix A, Table 3). The rural-born people as a whole rank only a little higher than grammar school graduates (2.75 compared with 2.42); those born in villages rank higher, then come those born in small cities, and next those born in large cities. The suburban-born rank highest of all, being almost as high as college graduates (3.87 versus 4.22).

The people who migrate are much more uniform than those who stay near their birthplaces. No matter what the type

of birthplace may be, those who move away stand higher in the Field Worker's estimates than do those who stay at home, except in the suburbs of large cities. The difference, however, between stay-at-homes and migrants is greatest among those born on farms and in villages. It decreases fairly regularly as one goes from the rural districts to the villages, and then to the small towns, the small cities, and the large cities. Finally in the suburbs it disappears or is even reversed, for there the two groups—migrants and stay-at-homes, both being very small—are practically alike. Unfortunately the suburban group is incomplete, for many people who really belong to the suburbs or at least to the suburban parts of large cities are unavoidably classified with the cities. If they could be added to the suburban group its peculiar and generally superior qualities would probably be still further emphasized.

The most significant fact of all in respect to migration is perhaps that those who migrate long distances are on the whole superior to those who migrate short distances. As a matter of convenience the persons who live outside the county of their birth but in the same or an adjacent state are counted as migrating short distances, while those moving to non-adjacent states are counted as migrating long distances. Among persons born in communities of all sizes up to cities of 100,000 those who migrate long distances rank decidedly higher than those migrating short distances. Among those born in large cities, however, there is no appreciable difference between the two types of migrants.

Another highly significant fact is that the people who migrate long distances are just about alike in social level, no matter where they were born. They not only outrank all others except those born in suburbs, but are very uniform in quality. For example, among those who remain in the

county of their birth the Field Worker's averages (in Table 3, Appendix A) run from 2.42 in the case of villages, or 2.47 among the rural born, to 3.93 among the suburbanites, a difference of 1.30. Among those migrating to more distant states the conditions are quite different, the range being only from 3.28 in the case of people born in places of 2500 to 10,000 up to 3.62 among those born in the largest cities, a difference of only 0.34.

These facts seem to present an excellent illustration of a general law as to the selective power of migration. The law seems to fall into two distinct portions, together with an important corollary:

(1) Voluntary and unaided migration seems to involve a distinct selective process whereby those who migrate tend to be more competent than those who stay at home. This tendency diminishes steadily as one rises in the scale of competence or opportunity, and is finally reversed in the upper social levels and among people whose opportunities are especially great. Under these latter conditions the migrants tend to be no more competent than those who stay at home and perhaps less so. Applied to European migration to America this means that, barring the immigrants who were aided by steamship companies and in other ways, the United States has tended to attract peasants, skilled workers, and other people of the lower or middle classes who were better than the average. From the upper social classes, however, under normal circumstances, a country like the United States appears to have attracted people who on the whole are only average or even below the average for their social class. This ceases to be the case, however, when religious, political, or social persecution enters into the matter, or when special inducements are held out as in the case of men like Einstein.

(2) The other part of the law is that the longer, more

difficult, or more expensive the migration, the better the quality of the migrants, and the greater the probability that those from different social levels or different countries will be homogeneous. This means that the European immigrant who goes to the western United States is likely to be of higher grade, on an average, than is the one who stays near the Atlantic coast. Hence in California the gap between European immigrants and natives is less marked than in Pennsylvania. In the same way the average quality of the immigrants arriving at any given time is likely to be higher in New Zealand than in eastern Canada. An example of this is seen in the values of the farms owned by people born in various countries but living in different sections of the United States, as described by the senior author in a book called *Business Geography*.

(3) This second law leads inevitably to a corollary which seems to be well attested by history. According to this the earlier settlers in a given region, that is, the real settlers who come with their families and not the adventurers who precede them, are likely to be of higher quality than are those who come later. Some special circumstances like persecution may of course intervene later and send an unusually high type of immigrant, but that does not alter the law. This follows from the fact that the first settlers almost invariably experience much greater difficulties than do those who succeed them. An active selective process is thus involved. In the first place, unusual courage and determination are required to break home ties and plunge into a dangerous and difficult adventure. This means a moral or temperamental selection. In the second place, the expense of migrating is greater than at a later date and this involves an economic selection. And finally after the new home has been reached the difficulties of becoming established are much

greater than they will be in later days, so that physical weaklings die and moral weaklings return home.

The next subject to claim our attention is the occupations and economic situation of our sample family as set forth in detail in Appendix B. So far as occupations are concerned, the whole matter may be summed up very briefly. A man of the Huntington family, and presumably of the old New England families as a whole, is four times as likely to enter the professions as is the average man in the United States. The corresponding chances in other lines are more than two to one that he will be a business executive, and one and a half to one that he will be a salesman or clerk. The chances that he will be a skilled workman are almost exactly the same as for the average man, but there is only half as much chance that he will be a farmer, and still less that he will be a skilled laborer. Putting the matter in another way Table 4 in Appendix B shows that among this old New England stock there are 17 professional men out of every hundred as compared with 4 in the United States as a whole; 20 business executives against 9; 17 clerks and salesmen against 12; 24 skilled laborers against 24; 12 farmers against 25; and 11 unskilled laborers against 24.

We saw in a previous chapter that in modern times the leaders in this Puritan family have shown a strong tendency toward intellectual and altruistic rather than commercial, industrial, and political pursuits. The same is true of the rank and file. This is evident from the following figures showing how many men named Huntington are found in various professions for each man that would be expected if these people behaved like the average of the United States; college professors 9; authors or editors 8; doctors or dentists 7; engineers, chemists, etc. 5; lawyers 4; clergymen, Y.M.C.A. secretaries, etc. 4; artists, musicians, actors, etc. 3; teachers

not in colleges 2; business executives 2. Among the occupations which today appeal most strongly to the highly intellectual type of man those of college professors and authors or editors rank very high. Taking due account of the total number of men in each occupation the tendency of our sample family toward these two occupations is about fifty per cent stronger than toward the more practical professions of the doctor and engineer, and twice as great as toward law and the ministry, which were the two main professions in colonial days. It is four times as great as toward business. In view of the common assertion that Americans are dollar chasers and think only in terms of business and industry it is most interesting that here again among the rank and file, just as among the leaders and the famous branch of the Adams family, there is a tendency toward other and more intellectual interests. Equally noteworthy is the fact that among the modern Huntingtons as to whom we have data, not a single one appears to be primarily interested in politics.

The general economic status of our sample family, as it appears in the questionnaire, is one of comfort but not affluence. People bearing the name Huntington are about 50 per cent more likely to own their homes than are the average people of the United States (Table 8 and 9, Appendix B). This is true almost equally in all parts of the country. The professional people are the most likely to be home owners, but differ very little from the business executives in this respect. The farmers are considerably less likely to own their homes than are the two preceding groups, but are one third more likely to do so than are farmers in general. The use of telephones naturally shows about the same economic level as does the ownership of houses (Tables 10 and 11). The farmers of our old New England family are more than twice as likely to have telephones as are those of the country in

general. In comparison with the farmers of the north, however, where most of them live, the difference is reduced to about 50 per cent. A member of our sample family who is not a farmer is 30 per cent more likely to have a telephone than is the average member of the non-farm population as a whole.

By means of automobiles we are able to reduce our estimate of the economic status of this family to dollars but not to cents (Tables 12 and 13). The actual number of automobiles in proportion to the population is only about 13 per cent greater among the persons who answered our questionnaire than among the population as a whole. A greater difference could hardly be expected, for automobile ownership is now so common that almost every family has a car. Like literacy in a country where universal education has long prevailed, it has ceased to be a very delicate index of economic differences. The cost of the automobiles is a much better index. Among the cars sold in the United States in the four years from 1928 to 1931 the three chief inexpensive makes, namely, Ford, Chevrolet, and Plymouth, formed 57 per cent of the total. They comprise only 42 per cent of the cars reported by the Huntingtons. On the other hand, cars costing over a thousand dollars formed only 12 per cent of those manufactured in the four years under discussion, but they comprise 26 per cent of those reported in the questionnaire.

A still better indication of the true state of affairs is an estimate of the actual cost of the cars. Basing the calculations on the prices of the standard 5-passenger sedan, the average value of all the cars sold in these four years was $777, whereas the average for those bought by the Huntingtons was $938. Combining this figure with the number of cars in proportion to the number of people, it appears that for every $100 spent on automobiles by a given number of people in

the United States as a whole, the same number of people in our sample family spent $137. If we omit the southern Negroes and the foreign-born persons elsewhere, this is reduced to approximately $125. In other words, judging by their automobiles, these people of old New England stock are about 25 per cent better off than the average native white person in the United States as a whole. Their telephones indicate about the same condition. Their ownership of homes, however, shows a greater departure from that of the average even if we consider only the native whites. Probably this is partly due to the fact that we are dealing with a group which has been established in the country for many generations. This, however, is not the main factor, for the highest percentage of home ownership, approximately 70 for every hundred adult men, is found among the professional people and business executives, the very ones who are most likely to live at a considerable distance from their childhood homes. Therefore it seems probable that the strong tendency toward home ownership is due mainly to the combined effect of a favorable economic level and of the same type of training and character which causes these people to be comparatively intellectual and religious in their tastes, as will appear more fully later.

On the whole this picture of the economic status of our sample family does not indicate great wealth. In this respect it corresponds with what we have found as to the tendency toward intellectual and philanthropic rather than commercial, industrial, and political activities. Nevertheless, it is clear that a rather high degree of general comfort prevails, and that the number of people who are abjectly poor is very small. Moreover, it is evident that we are here dealing with a group whose economic status, home ownership, and general character as tax payers and citizens give them a large

stake in the preservation of the present social order. We suspect, however, that their intellectual and philanthropic tendencies work the other way, and make many of them strong advocates of pronounced changes in our economic and social systems. This, however, is a mere guess.

We turn next to education and religion. After allowances are made for various factors which are explained in Appendix C, it appears that among the adults of our sample family approximately 22 per cent of the men and 16 per cent of the women are college graduates (Table 16, Appendix C). This is about eleven times the percentage for the country as a whole. Another 35 per cent, taking both sexes together, have a high school education, but did not go to college. This is between three and four times as many as in the general population. The number who have only a grammar school education is a little less than in the general population, being somewhat over one third. On the other hand, even when allowance is made for ignorant persons who did not reply to our questionnaire, only about one eighth of the Huntingtons appear to have left school before completing the grammar school, or eighth grade, whereas this is true of approximately half of the adults in the entire country. Obviously then, the educational status of the descendants of the old Puritans, so far as we can judge from our sample, is very different from that of the general population—a difference corresponding closely to that which prevails in occupations.

Although religion is no longer a dominating interest of the Huntingtons, as it was in the seventeenth and again in the first two thirds of the nineteenth century, it is still important. This is evident in the fact that approximately 64 per cent of the adults for whom we have reports are church members (Table 17, Appendix C). The percentage would almost certainly not fall below 55 even if we had complete

reports from all members of the family. Among the general population of the country as a whole, on the contrary, the percentage of church membership among Protestant adults is approximately 40, for 35 per cent of those over 13 years of age are church members. Another noteworthy fact is that the church members as a group stand higher in the social and intellectual scale than do the others when tested not only by the Field Worker's estimates but by occupations (Tables 18 and 19). At any rate 79 per cent of the professional men are church members, whereas only about 57 per cent of the laborers, both skilled and unskilled, report such membership. The business executives, clerical people, and farmers fall between these two extremes, but approach nearer to the laborers than to the professional people. When people are classified according to the Field Worker's estimates the case becomes much clearer (Table 20). No less than 80 per cent of the men and 86 per cent of the wives with the highest rating (rank 5) are church members. Among the men the percentage falls steadily in the Field Worker's other ranks until it reaches a level of only 49 in the lowest. Approximately the same is true of the wives except that even among the people of rank 1 the percentage of church membership among the wives has fallen only to 70. The wives of all ranks are more likely to be church members than are the husbands. The difference between the two sexes in this respect shows a slight tendency to increase as one goes down to the lower social levels, but this is so slight that it might disappear with fuller data.

Another notable fact about church membership is its geographical distribution (Table 17). Taking the men alone, it is highest (81 per cent) in the Rocky Mountain States, chiefly because a large part of the few Huntingtons who live there are Mormons. Much more significant is the fact that

the next to the highest percentage of church membership (76) is found in the Middle Atlantic States which include New York. On the other hand southern New England falls considerably lower, only 59 per cent. Most striking of all is the fact that the lowest percentages are found in the Pacific States (47) among the people who have migrated farthest, and in northern New England (28) where migration has most largely carried away the more active people. In the Far West the inhabitants appear to have failed to establish new church connections; in the non-industrial parts of the East the churches have died for lack of active young people.

Another interesting phase of religion is the great extent to which the old New England stock has changed its denominational affiliations (Table 21). The original Puritans all belonged to the Congregational Church, although a few soon became Quakers. In our day the leading denominations are the Episcopalians and Methodists, each with 19 per cent of those for whom information is available. Then come the Baptists, Presbyterians, and finally the Congregationalists, each with about 12 per cent. The rest are divided among many denominations, among whom Roman Catholics on the one hand, and atheists, agnostics, and people of no denomination on the other hand, each number about two per cent of the total. The Field Worker's estimates show a great difference among the denominations. The Episcopalians, Congregationalists, and Presbyterians stand highest and are much alike with an average of about 3.65 which is half way between that of college graduates (4.22) and high school graduates (3.00). The next large group consists of the Baptists and Methodists who stand close together with an average rank of about 2.85. They are followed by a group of fundamentalist sects such as the United Brethren, Lutherans, Disciples, Seventh Day Adventists and so forth, whose rank

of 2.65 is a little above the average for grammar school graduates (2.42). The occupational status of the various denominations is about what would be expected from the Field Worker's estimates (Table 22). The Episcopalians, Congregationalists, Presbyterians, and "no church" group are especially strong in professional people and business executives; the Baptists and Methodists in skilled laborers; and the fundamentalist churches in farmers.

The last type of information obtained from our questionnaires is more or less biological in character, as appears in Appendix D. On the whole these descendants of the Puritans tend to be blue-eyed (Tables 23 and 24). Just about half report genuinely blue eyes, while another fifth or more have gray or hazel eyes. This leaves only 30 per cent who are brown-eyed. On the whole the blue-eyed people outrank the others according to the Field Worker's estimates, their average being 3.1 in comparison with 2.8 for both the brown and the gray or hazel eyed (Table 25). This difference, however, is not consistent from one occupation to another, being clear among professional people and farmers, less marked but still distinct among skilled laborers, and actually reversed among business executives. Among clerical people and unskilled laborers there is no difference between the blue-eyed and the brown-eyed. Curiously enough, in spite of the success of the brown-eyed business executives, the percentage of blue-eyed persons among the executives is higher than in any other main group, although the farmers and professional men show almost the same figure. Nevertheless, if we take only the clergymen, physicians, teachers, and social workers, that is, the most altruistic and socialized professions, the percentage of blue-eyed persons rises far higher than in any other group, namely to 74 per cent. This, however, is based on only 31 persons, and hence has little

significance. On the other hand, among skilled laborers, clerks, and salesmen, and especially among unskilled laborers the percentage with blue eyes falls to relatively low proportions, only 35 per cent in the case of the latter.

One more characteristic of the blue-eyed people should be mentioned. Those who migrate to more distant states are a little more likely to be blue-eyed than are those who remain in the county of their birth, or in the same or an adjacent state (Table 23).

Putting together all these facts, the blue-eyed people of today tend to be more like the original Puritans than do the brown-eyed. We are quite certain that the original Puritans were predominantly, although by no means wholly blue-eyed. One reason for this is that the available portraits and descriptions point in this direction; another is that the people in the part of England whence most of them came are now of this sort and may have been even more blue-eyed in the past. If we are correct in this conclusion, the modern blue-eyed people are more like their ancestors than are the brown-eyed ones not only in physical traits, but in their tendency to wander and in the preference of their most able members for the more altruistic types of work. The data are by no means clear or convincing, however. The only thoroughly conclusive fact is that the farmers, who are relatively isolated from the rest of the population geographically, and the business executives and professional people, who are more or less isolated socially, tend to be much more blue-eyed than do the laborers of all kinds and the lower business types such as clerks who form the great bulk of our middle-class population. The relatively isolated groups have presumably intermarried with non-Puritan stock less freely than have the others.

One other feature of eye-color is most puzzling. Omitting the children, as to whom our data are inadequate, we find

that among adults the oldest people, those over 70 years of age in 1932, are quite blue-eyed (58 per cent, Table 26). Among those of lesser age this percentage diminishes regularly from decade to decade until it amounts to only 43 per cent among those 40 to 49 years of age. Then it rises rapidly to 55 per cent among those 30 to 39 years old, and 59 per cent among those between 20 and 29 years of age. Since the number of cases in every age-group is over one hundred, and in some cases nearly two hundred, this systematic change can scarcely be accidental. The diminution in the number of blue eyes from the old people down to those aged 40 to 50 might easily be explained by increasing intermarriage with other elements of the population as time goes on, but the very marked reversal of this tendency among the younger generations still awaits explanation. It baffles us completely.

The question of marriage next arises (Tables 27–32). On the whole the percentage of married persons in our sample family is nearly 10 per cent less than that of the population of the United States as a whole, but about the same as that of other groups occupying similar social, economic, and occupational levels. A study of the age of marriage brings out a well known condition, namely that people like clerks and laborers whose maximum earnings are reached relatively early tend to marry young, whereas farmers and especially professional men marry later. The same is true of the wives, but the difference between the ages of the husbands and wives increases with the age of the husbands. When people are grouped according to their social level rather than by their occupation, a slightly different picture appears. According to the Field Worker's estimates the men of the highest rank marry at an average age of 29.2 years and their wives at 25.8. As we go down in the scale the age of marriage decreases until at the next to the lowest level it is 26.3

years for the men and 22.1 for the women. This difference between one social level and another, as has often been pointed out, is presumably harmful because it increases the chances of large families among the less competent rather than the more competent parts of the population. At the very lowest level, however, the age at marriage among the least successful men jumps to 29.6 years, or higher than that of the most successful. The age of the wives also rises, although not so much, being 24.5 compared with 25.8 among the most successful. This is a good thing so far as it diminishes the number of children born in these less successful families where both the heredity and the training of the children are likely to be relatively poor.

The interval between the ages of husband and wife increases systematically from the highest social level (3.4 years) to the lowest (5.1 years). An interesting point in respect to this is that a comparison between the people over 60 years of age and those 40 to 60 years old shows that at the upper levels, but not at the lower, the age of the husbands is diminishing and that of the wives increasing. Thus in ranks 4 and 5 of the Field Worker's estimates the difference in the ages of husband and wife has fallen 1.8 years; in the middle group, rank 3, the fall has been 1.6 years; while in the lowest group, ranks 1 and 2, the change has been only 0.3 year and has been an increase, not a decrease. Since the age of the women at marriage is increasing at the upper levels but not at the lower, this tendency for husbands and wives to be more nearly of the same age is also bad for the future; it tends to reduce the size of the families among the more competent people.

A comparison of the geographical distribution of the unmarried members of the two sexes brings out an interesting relationship. The unmarried women, the majority of whom

are of course young, are distributed over the country in almost the same way as are the married men. The unmarried men, on the contrary, are distributed in quite a different way. They are relatively scarce in the South Atlantic, Pacific, southern New England, and Middle Atlantic States; they are moderately numerous in the vast area of the Central States, both northern and southern; and they are very numerous in northern New England and the Rocky Mountain States. The cause of this becomes evident when we investigate the relative numbers of unmarried men and women in communities of various sizes. In the rural communities there are only one third as many unmarried women as men; in villages and towns of 1000 up to 10,000 inhabitants half as many. In the cities of over 10,000, however, the numbers of unmarried persons are approximately the same for both sexes, but the suburbs show a decline once more in the relative number of women. The explanation of this is simple. Young women of the social levels here dominant are more migratory than young men. They cannot find jobs on the farms or in the villages and small cities. Clerks, stenographers, business women, and even teachers are far more likely to find work in big cities than elsewhere. Many young men, on the contrary, find work on farms or as local painters, carpenters, garage men, clerks, and the like. In many cases one son stays on the farm or in the village home to take care of the old people, while the other sons, if there are any, and all the daughters move away. One effect of this is that the young men who are left behind often fail to marry, because the girls whom they might have married have moved away. This is quite as effective as migration so far as the disappearance of the old New England stock from the country districts is concerned.

We have already discussed the ancestry of the sample

family that we are studying, but let us see what their own reports say about it. As nearly as we can tell the people who today bear the name Huntington are at least four fifths English in their ancestry. The questionnaire indicates that at least half of the other fifth is Irish, Scotch, or Welsh. The remaining tenth is more than half Teutonic, by which we mean German, Dutch, or Scandinavian. Most of the remaining 5 per cent or less is French. Up to the present the admixture of any elements outside northwestern Europe is negligible. On the whole the people with purely English ancestry outrank the others according to the Field Worker's estimates, but there is great variation from one national group to another. The amount of non-English ancestry is greatest in the Pacific and West North Central States, and least in New England and the South. This accords with what we saw earlier as to the selective effect of migration. In New England, where the immigrants have experienced the least selection, there has also been the least tendency for the old stock to intermarry with them. In the West and Northwest, where there has been far more selection of immigrants by reason of the greater expense and difficulty of reaching the new homes, the old stock and the new are more alike and have intermarried more freely. The social freedom of the frontier has also worked toward the same end. So far as occupations are concerned the professional men and business executives show the least foreign ancestry and the farmers and unskilled laborers the most. When the men are classified according to the Field Worker's estimates there is an almost steady increase in non-English ancestry from the highest rank to the lowest. Curiously enough, however, the professional men and business executives show more tendency to marry women with non-English ancestry than do the middle class people of ranks 3 and 2, although by no

means so much as do the men of the lowest rank. (Tables 33–36)

The last thing to note about ancestry is that the amount of non-English ancestry is increasing very rapidly, being three times as great among children under twenty years of age as among old people over 70. Thus at the end of this chapter we come back almost to the point where we started. At the beginning we found that the geographical distribution of our sample family indicates a very strong tendency for the old New England stock to spread itself more and more evenly over the country as a whole. Here at the end we find a similar tendency for this old stock to intermarry more and more with all kinds of people. In other words, for two centuries after its arrival in America the Puritan stock tended not only to increase greatly in numbers, but to retain its individuality geographically, biologically, and culturally. During the last century there has been an ever accelerating tendency to break down the old individuality in all three of these respects. This is no new discovery, but it needs restatement and its implications demand most careful scrutiny. In the next chapter we shall discover a new and hitherto unrealized tendency which may some day cause a great change in the composition and characteristics of the people of America.

Chapter IX

SIZE OF FAMILIES AND FUTURE TRENDS

THE data given in the preceding chapters are important chiefly in reference to the question of whether our present civilization promotes an increase or decrease in the most valuable kind of families. The most valuable, we believe, are those which give their children both a good biological inheritance and a good training. In this chapter we shall see what is actually happening to the size of families. Figure 2 shows the average size from early colonial times onward. Down to 1890 it is based on all the families reported in the Huntington Genealogical Memoir, and after that on the statistics gathered in our questionnaire. Except for the final decade the solid line represents completed families. The dotted line at the right hand end represents the actual data for persons married from 1910 to 1919. Since the data were gathered mainly in 1932, but partly in the two or three preceding years, by no means all of the families were then complete. If 30 more children should be added to the 99 families on whom this part of Figure 2 is based, the curve there would follow the solid line, which undoubtedly comes close to representing the truth.

This curve is one of the most important features of this book. Although it is based on people of Huntington descent, these people are also descended from several thousand other old New England families. Moreover, as we have repeated again and again, the Huntingtons are merely a random sample of the whole body of people descended from the old

Puritan stock of New England. Hence the first reason for the importance of this curve is that it is representative of millions of people belonging to the type which has thus far been most active in contributing leaders to America. The second reason is that it shows not only the well known trend toward a great decline in the size of families during the nine-

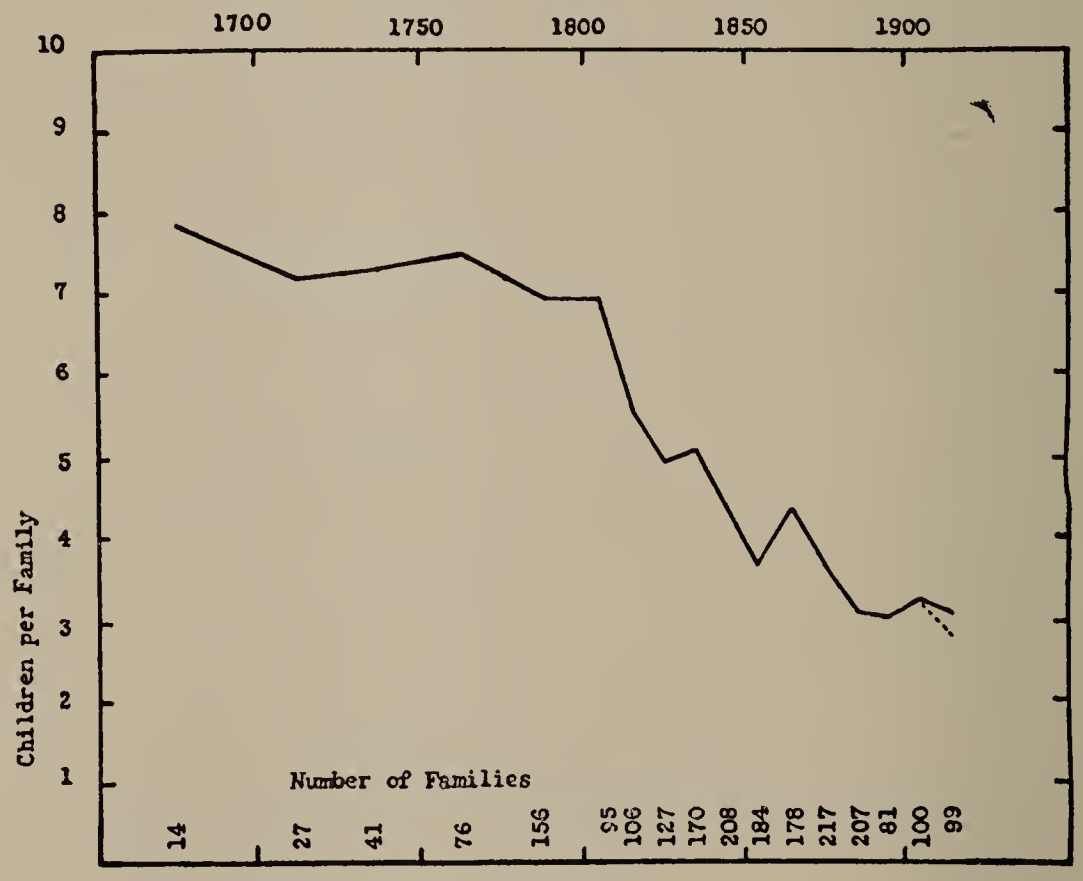


Fig. 2. Size of Families Since Colonial Times

teenth century, but a termination of this trend in the present century. We believe that the decline during the nineteenth century is one reason for the great amount of crime, graft, bad government, economic injustice, and other evils which today afflict America. We hope that the cessation of this decline is a precursor of a biological change which will bring with it great social, economic, and political changes. The

reason for this hope is that the secret of future events is often hidden in trends which are now scarcely visible. Today the eyes of students who are investigating human heredity and problems of population are focussed on the great trend whereby the people who are presumably the most valuable have much smaller families than have those who seem less valuable. But perhaps the other trend, the one toward stabilization or even increase in the size of families, will be the major biological fact of the future.

The trend toward small families has followed the usual course of great social reforms. It began among the more thoughtful people in the upper levels of society more than a century ago and has worked downward. It has not yet permeated all classes equally, but its effect is almost universally visible. For example, among a hundred completed families of working men whom the authors recently investigated at Framingham, Massachusetts, we found an average of only 3.7 children per family. This is only about half the size of the average family among the best type of people in early colonial days. Even among the unskilled third of these working men the average number of children is only 4.5. In other words, average working people have now made a reduction in their families equal to that which the old New England stock had achieved in 1850, or less than half a century after this tendency began. What the upper levels of the New Englanders had done still earlier, that is, a hundred years ago, the lower levels are doing today. Presumably this same tendency will keep on until it permeates all sections of our population. In such matters it seems to be a general rule that what the upper classes do today, the lower classes are likely to do tomorrow.

With this general principle in mind, let us examine Figure 2 in detail. From 1650 until 1810 the families averaged not

far from seven children apiece. There was a slight decline from the very large families of the earliest settlers, but nothing of much significance. Beginning with those who were married from 1811 to 1820, however, and whose families were born mainly between 1815 and 1833, there was a tremendous decline in the number of children. This continued at a gradually diminishing rate until 1880. The couples who were married from 1880 to 1889 had an average of only 3.18 children in contrast to 6.90 among those who were married 80 years earlier. Since 1880, however, there has been no further change in the number of children. Among these people of old New England stock the families appear to have become stabilized at an average size of about 3.1 children. In view of the relatively small number of infertile marriages, and the low death rate prevailing among this stock, this number appears to be about sufficient to ensure the preservation of the same number of persons from generation to generation.

Other evidence points to a similar stabilization of families. Wilcox, Sydenstricker, and Lorimer have all investigated the number of children per native white woman of native parentage at successive censuses. They find that most sections still show a decline from decade to decade. This is especially rapid in the South, slower in the West, and slowest in the North and East. In southern New England there has recently been little change. In northern New England there actually appears to be a reversal, so that the birth rate among native white women, including especially those of native parentage as Lorimer shows, is a trifle higher now than formerly. This region is the one where the old colonial white stock, among which birth restriction first made its appearance, is most predominant. The people there are of essentially the same general type as those used in Figure 2, but are restricted to a limited area, whereas the Huntingtons are

found in every state of the union. Thus when we look at the problem areally, as well as when we look at it from the standpoint of a particular biological stock, we find evidence that among certain groups of people the tendency toward birth restriction has reached its climax, and a new tendency toward stabilization has appeared. It is interesting to note that according to Dr. Lorimer's thorough analysis the number of children per family in northern New England appears to be about the same as that which appears in the later parts of Figure 2.

TABLE XXVI

FIELD WORKER'S ESTIMATE	NUMBER OF FATHERS	NUMBER OF CHILDREN PER FATHER
Rank 5 (highest)	18	2.62
Rank 4	57	2.56
Rank 3	142	3.21
Rank 2	83	3.30
Rank 1 (lowest)	18	4.94

The next question is whether this stabilization in the size of families applies to all levels of society. As a partial answer we may use our Field Worker's estimates, as described in an earlier chapter. Using all the living or very recently deceased Huntingtons who were married before 1910 and whose families are therefore presumably complete, and calculating the number of children per father in such a way as to eliminate the effect of a larger proportion of the higher social levels in later decades, we get the results shown in Table XXVI.

This accords with the great general tendency toward larger families among the less competent people. Nevertheless, three facts deserve notice. One is that birth restriction, or at

least a pronounced lowering of the birth rate since colonial days, is evident even at the low social level of Rank 1. A family of less than five children is quite different from one of seven. In the second place, the two upper groups are almost identical, and the next two have only about 25 per cent more children. This indicates that among all of these people of old English descent there is now almost equally great birth restriction except among the lowest five or ten per cent. The third noteworthy fact is that in Rank 5 the average number of children is a trifle larger than in Rank 4. This

TABLE XXVII

DATE OF MARRIAGE	CHILDREN PER FATHER			NUMBER OF CASES		
	Ranks 4 and 5 (highest)	Rank 3	Ranks 1 and 2 (lowest)	Ranks 4 and 5	Rank 3	Ranks 1 and 2
Before 1890	3.16	4.50	4.53	25	48	32
1890–1899	2.70	2.82	3.79	17	40	24
1900–1909	2.34	3.10	4.28	27	41	22
1910–1919	2.60	2.20	3.69	32	35	32
1920–1929	1.81	1.53	1.91	36	36	31

may be sheer accident, for the number of families is too small to be more than suggestive. Nevertheless, it is worth looking into.

In order to have families enough to warrant any study of such a possible increase in the number of children in the upper classes during recent decades let us put together Ranks 4 and 5 on the one hand, and Ranks 1 and 2 on the other. We will also use the younger families, even though they are not complete. Table XXVII gives the results.

The significant fact here is that during the last two decades the successful people of Ranks 4 and 5 have been having

more children than the medium people of Rank 3. It is quite certain that when the families of the last two decades in Ranks 4 and 5 are complete, the number of children born to parents married from 1910 to 1919 will be greater than to parents married from 1890 to 1899. The number born to the youngest group of parents will probably be greatest of all. Among the middle class of Rank 3, however, this can scarcely be the case. Among them the process of reducing the number of children seems still to be in progress. All this, in spite of the scantiness of the data, suggests that among the most successful people the number of children reached a minimum in the families of those who were married during the first decade of the present century, and is now increasing. Perhaps this increase is correlated with the fact that since that decade the tide of immigration has fallen. If this is so, it bears out Walker's theory of the close connection between immigration and the birthrate. However this may be, it seems clear that the low birthrate among the most competent of the people who were married from 1900 to 1909 indicates that the pendulum had swung too far. It seems now to be turning back preparatory to coming to rest at a level adapted to our new type of civilization. Our data also suggest that among people of the upper and middle classes there has begun to be a tendency for the more successful to have more children than the less successful. We may reasonably expect that this, too, like the reduction in the size of families will occur among the lower classes when at last they reach a similar stage of stabilization.

A few other data are available as to this question. In *The Builders of America* Mr. Leon F. Whitney and the senior author described a study based on about 800 Yale College graduates of the classes of 1893, 1896, and 1898. We also described a similar study of about 2,000 Harvard graduates

of the years 1899, 1900, and 1901, which was made by Dr. J. C. Phillips at our suggestion. Both studies gave identical results. The method at Yale was to ask about ten leading members of each class to grade their classmates into five groups based on general value to society. The most valuable man was the one doing most to make the world a better place in which to live. Of course outward success according to the common use of the term entered into the estimates, but many men were ranked high because of good work in inconspicuous positions. Missionaries, for example, topped the list both at Yale and Harvard.

Having obtained an average rating for each man, the next step was to arrange the men in ten groups according to their success. When the families of these groups are investigated, a surprisingly pronounced and regular change from the most successful to the least successful is apparent, as appears in Table XXVIII and in Figure 3. The more successful tend to graduate from college younger and to be married younger than the less successful. Other tendencies are much stronger and more important. First, practically all of the most successful men are married—over 95 per cent—whereas only 66 per cent of the least successful tenth are married. Second, among those who are married, the percentage who have children is about 84 per cent among the highly successful, but declines steadily to only 40 among the least successful. Again, the number of children per father declines in similar fashion from 3.1 among the most successful to 2.2 among the group at the other extreme. The net result is that when the unmarried, the married who have no children, and the fathers are all included, the average number of children per graduate amounts to 2.42 among the most successful and only 0.85 among the least successful. At Harvard the corresponding figures are similar but slightly lower. Moreover, this same

contrast between the successful and the unsuccessful is found when the various occupations of the Yale and Harvard graduates are investigated separately. No matter whether

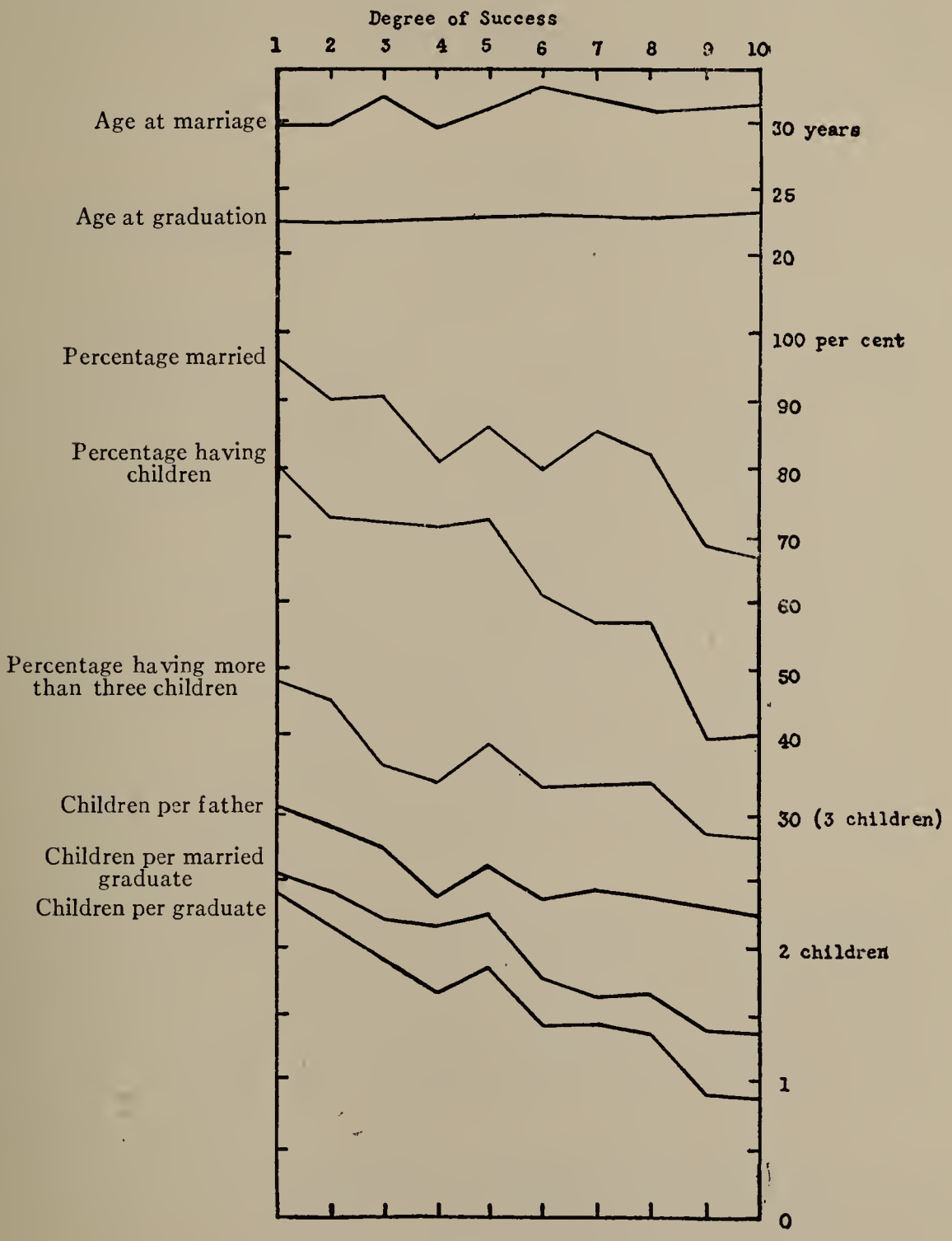


FIG. 3. MARRIAGE, SUCCESS, AND CHILDREN AMONG YALE GRADUATES

we take lawyers, ministers, engineers, bankers, artists, military men, writers, business men, or professors, the successful men, on an average, have decidedly more children than the less successful. Of course there are many notable exceptions, for some of the most competent and valuable people are childless, but we are talking about averages.

TABLE XXVIII

Family relationships of Yale College graduates of the classes of 1893, 1896, and 1898

DEGREE OF SUCCESS	AGE		PER CENT			CHILDREN		
	At Graduation	At marriage	Married	Having children	Having more than 3 children	Per father	Per married graduate	Per graduate
1	22.5	29.7	96.0	80.2	48.0	3.05	2.54	2.40
2	22.4	29.8	90.0	72.5	45.5	2.90	2.40	2.18
3	22.5	31.8	90.2	72.0	35.0	2.72	2.20	1.91
4	22.6	29.5	81.5	71.8	32.2	2.36	2.15	1.68
5	22.9	31.0	86.0	72.3	38.2	2.60	2.24	1.87
6	23.0	32.5	80.0	61.0	32.0	2.35	1.78	1.43
7	23.0	31.7	85.9	57.0	32.1	2.42	1.64	1.42
8	22.9	30.9	82.0	57.0	32.2	2.38	1.67	1.38
9	23.0	31.0	68.7	39.8	25.0	2.30	1.38	0.90
10	23.1	32.2	67.0	40.0	24.5	2.22	1.36	0.85

Another bit of evidence along this same line is found in the investigations made by Eden in Stockholm. In that highly prosperous and progressive city, where even the working people appear to be well satisfied and comfortable, the restriction of families has gone farther than almost anywhere else. One reason is that some years ago there was a strong socialist propaganda among the working people in favor of birth control. According to Eden the result has been that today among many groups of people the poorer and less

successful families have fewer children than do those which are more comfortably situated and more successful. In other words, we have here a case where the conditions which prevail so clearly among Yale and Harvard graduates are penetrating downward into the working classes. Similar conditions are reported from certain places in Germany and Holland.

Another kind of evidence is found in the investigation of Mormons made by Batts and Nelson. Here we are dealing with people among whom there is little, or no birth control. The investigators found not only that the number of children per family was about six, as was stated in a previous chapter, but that college graduates had almost as many children as parents who had merely a grade school education. Moreover, a study of 382 bishops, elders and other important persons in the Mormon church disclosed families averaging about seven children. Life in Utah is now very different from the colonial type. Nevertheless, the absence of birth control permits the families to be of colonial size. Moreover, under such circumstances the most able people have the larger families. If this is a general rule under such circumstances, it is of the utmost importance because it indicates a favorable instead of an unfavorable differential birth rate. In other words, the most competent families tend to increase faster than the less competent. But our data as to Harvard and Yale graduates and as to the people of Stockholm suggest that a similar situation prevails even more strongly when all parts of a given set of people are equally familiar with methods of limiting the size of families and controlling the interval between them.

The faculty of any great university perhaps provides a group where methods of birth control are as well understood as anywhere. Let us see what happens at Yale under such

circumstances. Incidentally we may add that we tried to obtain similar data from both Harvard and Columbia. Children, however, are of so little importance in academic eyes that in neither case did the university authorities have any data as to them. The Yale faculty affords striking evidence that within even a small and in many ways very homogeneous social group there may be highly significant differences in the birth rate. This conclusion is based on the entire official list of persons for whom the University Secretary keeps records. It includes not only ordinary teaching members of the faculty, but the corporation or trustees, the executive staff, research associates, exchange professors, and lecturers. The first question is whether these men have children enough to replace themselves. The answer is discouraging. Using the word "faculty" to include all the persons named above, we find that the 384 members of the faculty born previous to 1890 have only 634 children, or an average of 1.65 per man. A few children who died young have probably not been recorded, and some of the younger men will doubtless have more children, but even this is not likely to bring the average above 1.8. If allowance is made for the deaths that must occur before all the children reach maturity, it is obvious that when the sons of the present faculty are mature there will be only about eight of them for every ten men in the present generation. If these sons behave like their fathers, the succeeding generation will boast of only six grown men to replace the original ten, and soon there will be none at all.

When the faculty is divided into groups based on success as measured by academic standing and outside reputation, quite a different picture emerges. In order to get as homogeneous a group as possible we will take only the men born from 1875 to 1889. In one category we will place the mem-

bers of the Yale Corporation and a number of deans and other professors who are especially distinguished. These men were selected solely for their distinction without respect to the size of their families. In the next categories we will place, first, the other men of full professorial rank, then those with the ranks of associate professor, assistant professor, and lastly instructor. So far as ability and success are concerned the associate professors and professors differ very little, and many who are now associate professors will in time be full professors. Assistant professors, however, who

TABLE XXIX

KIND OF MEN	NUMBER	PERCENTAGE MARRIED	CHILDREN PER MAN INCLUDING THE UNMARRIED
Most distinguished group	37	94.6	2.64
Others of full professorial rank	113	93.7	1.52
Associate professorial rank	41	92.7	1.66
Assistant professorial rank	38	73.7	1.10
Instructorial rank	21	80.9	1.43

were born before 1890, have a relatively small chance of further change in rank and very few of them will ever become full professors. The same is still more true of instructors of similar age. The number of children per man in these five groups ranges from 2.6 in the most distinguished group through 1.5 for men of full professorial rank and 1,7 for associate professors down to only 1.1 for assistant professors and 1.4 for instructors (see Table XXIX). The number for the instructors is raised considerably by the fact that this small group includes several able men who give only occasional lectures and hence have an academic rank decidedly lower than would be the case if they were regular mem-

bers of the faculty. Their comparatively large families raise the general average. If only the genuine instructors who were born before 1890 were included, there would be scarcely one child per man. Of course finances, health, and temperament all play a part in this, but our present concern is with the numerical facts and not with the causes.

Now that we have distributed our men into groups based on ability we find that under a régime where birth control is fully effective, success in life is closely correlated with size of family. The thirty-seven men of the ages here considered who stand out most conspicuously in the Yale faculty are practically all married, and 86 per cent of those who are married have children. Thus this group has enough children to maintain itself and increase, provided the children behave like their parents as to marriage and families. On the other hand among the men who devote all their time to university work and yet have not risen above the rank of instructor or assistant professor by the age of forty-three only three quarters are married, and not much more than half have children. The children number less than half as many per man as do those of the most successful group. In other words, the Yale faculty agrees with the more able ones among the people named Huntington, with the graduates of Yale and Harvard, and with the people of Stockholm in indicating that among people where the size of the family depends almost entirely upon the choice of the parents, the most competent and successful tend to have the largest families.

The Yale faculty also agrees with the abler Huntingtons in suggesting that among the most competent groups there is a tendency toward an actual increase in the number of children per family. This appears from a comparison of the two parts of Table XXX. The first part is based on all men who have attained full professorial rank at Yale and

were born before 1895, together with the associate professors who were born from 1890 to 1894, and are therefore so young that they are likely to become full professors, but old enough so that their families are nearing completion. In the table all of these are divided into six groups according to their year of birth. Reducing the number of groups to three in order to make easy comparisons, we find that those born before 1875 have an average of 1.81 children per man including the unmarried and childless. Those born in the next decade, from 1875 to 1884, have an average of 1.71, and those born

TABLE XXX

YEAR OF BIRTH	ALL MEN OF PROFESSORIAL RANK			MOST DISTINGUISHED GROUP	
	Number of men	Per cent married	Children per man	Number of men	Children per man
1860–69	52	96.3	1.62	30	1.90
1870–74	46	95.6	2.02	21	2.05
1875–79	51	92.0	1.61	14	2.28
1880–84	50	94.0	1.82	11	2.73
1885–89	50	98.0	2.06	11	3.09
1890–94	55	94.5	1.84	—	—

from 1885 to 1894 have an average of practically two (1.97). But some of this last group were only 37 years old when the data as to their families were gathered. So this group is sure to have more children, and even the preceding group where the youngest men are aged 47 may have some. These facts indicate that in spite of the rapid spread of birth control, the families of Yale professors appear to be increasing.

The second part of Table XXX suggests that the increase in the size of families is thus far found mainly in the more distinguished group. It is based on the 87 members of the Yale faculty who appear to be most prominent. Among

these the number of children per man increases steadily from 1.9 among the men born before 1875 to 3.09 among those born from 1885 to 1889. The number of men concerned is of course small. It is also possible that failures to record children who died soon after birth were more common in the earlier records than now. Yet in spite of this there can be little question that the increase in the size of families shown by these statistics is real. It confirms our other data in suggesting that the diminution in families arising from birth control has run its course among the more distinguished type of men, and that such men are returning to a situation wherein those best fitted for parenthood have enough children to replace themselves and to provide for a small increase from generation to generation, whereas those who are not so well fitted have fewer children so that their lines will die out. Under the impact of the movement for the restriction of families during the last century the ideal family came to be looked upon as having only two children. This ideal is reflected in the size of the families of the men born before 1870. But the pendulum had swung too far. Now it is moving back. That the backward swing should begin among the most distinguished men is natural, for all new and forward-looking movements begin among the more thoughtful and far-sighted members of society. The movement in the opposite direction toward the reduction of the unduly large families of a century or so ago also began with the leaders. But what the upper classes do in the present generation, the rank and file will probably do later. Therefore when all classes learn to exercise full control over the size of their families, we may hope that at each level of society the better types will have more than enough children to replace themselves, whereas both the more selfish and less competent types will find it to their own advantage not to have so many.

Chapter X

WHAT MIGHT HAVE BEEN

MANY people have wondered what would have happened if the United States had received no immigrants after the colonial period. The facts set forth in this book suggest that in many ways life would have been more satisfactory. The first problem is how many people would the United States now have if no immigrants had come from Europe after the War of the Revolution. Let us start with the year 1800. Colonial conditions persisted up to that time, and there was practically no immigration for the first two decades after the end of the Revolution. Moreover, a comparison of the censuses of 1790 and 1800 gives some inkling of what was happening. As the figures now stand, without any correction for possible errors of enumeration, the population increased from 3,929,000 in 1790 to 5,308,000 in 1800. This growth of 35 per cent was due in large measure to the natural increase of the population through the excess of births over deaths. If continued for a generation, such an increase would mean approximately 2.70 persons in the second generation for every one in the first. This is larger than the rate of increase among the first five generations named Huntington beginning with the original father who never reached America. The members of these five generations were mostly born before 1760. They increased at the rate of 2.35 per generation.

If the rate of increase indicated by the census had continued from 1800 to 1930, our population at the latter date

would have numbered approximately 264,000,000. The more reasonable rate of increase among the early Huntingtons, if applied to the whole population during the same interval, would have given a population of 162,000,000 in 1930. Even if we suppose that the size of families decreased slowly, a population of 100,000,000 might have been reached by natural increase. From 1775 to 1810, the 251 Huntington families for which we have records had an average of 6.9 children apiece. By reason of the high death rate this served to produce only about a two-fold increase from one generation to the next. If the ratio of increase had been 2.2 at all times since 1800 the present population would be about 120,000,000. We may assume that at present, among people of the sort with whom we are dealing, about 15 per cent die before the age of marriage, 10 per cent of the survivors fail to marry, and 10 per cent of those who marry have no children. This means that 5.8 children per family are needed in order to double the population. If the size of families since 1800 had declined just fast enough to keep pace with the decline in the deathrate, the present families would have nearly 5.8 children and the population would have just about doubled from generation to generation. At this rate, if there had been no immigration after 1800, the United States would now contain 80,000,000 people.

From these diverse estimates it is evident that there is nothing biologically impossible about deriving a population as great as that of today from the colonial population by means of natural increase without immigration. Certain groups like the Mormons, including even the elders and other leaders, still have families averaging six or seven children. Most of the white people of the South have done likewise until recently. Moreover, families of this size are by no means uncommon even now among the very elite of America,

being relatively more numerous there than at slightly lower levels. From all this we conclude that Walker was right when he asserted that if industrial growth, immigration and other concomitant conditions had not caused the families of the older American stock to decline in size, the normal natural increase of these descendants of the early colonists would have given the United States approximately its present population. But even if the population arising in this way were now only 75,000,000 instead of 125,000,000, would the American people be any less happy and contented? In 1933 with 15,000,000 unemployed persons and their 25,000,000 dependents it looked as if we had many more people than we needed. This proves nothing, however, for unemployment might also have been rife with a smaller population. Nevertheless, there is no good reason to think that we are better off because of mere numbers. Quality counts for vastly more than quantity.

If there had been no immigration after the Revolution, and if the United States were now inhabited by a hundred million people descended from the pre-revolutionary stocks, how would our economic and social conditions compare with those actually existing? Of course no one can really answer this question, but we can at least gain some idea of the general principles involved in the answer. But is not the question so purely academic that it is not worth answering? We do not think so. The question seems to us eminently practical because it has a direct bearing on our future national policy. The widespread and growing habit of birth control is leading to an almost incredible process of selection whereby some types of people are being rapidly eliminated, while others are multiplying. The astounding contrasts in this respect which arise even under natural conditions are illustrated by the four original Huntington brothers. So far as was known

at the time when the Huntington Genealogical Memoir was prepared the number of men bearing that name and descended from the various brothers was as follows in the eighth generation: Thomas none, William 37, Christopher 102, and Simon 191.

Exactly this sort of elimination of some families and rapid increase of others is happening today right under our eyes. With the advent of birth control its intensity has been greatly increased. Whole groups of people with certain qualities of mind or body are fast disappearing; families with other qualities are increasing so rapidly that they will soon dominate the country. We need to recognize the enormous changes in our population which have already taken place through such selection. We have already seen that they may be among the most potent factors in such phenomena as the growth of crime and the spread of low ideals. It is even more necessary to wake up to the fact that in the immediate future such changes bid fair to transform our national character at a still more rapid rate. Only by understanding the whole problem can we direct the growth of the nation aright. Social conventions are powerful, but changeable. A new set of such conventions, or *mores*, concerning parenthood is fast arising. A study of what might have happened if the earlier haphazard selective process of colonial times had produced its full effect without further immigration may contain valuable lessons as to how to frame the new mores.

This does not mean that we desire a country composed only of descendants of the Puritans. We are simply using them as an example. For all that we know to the contrary, the right process of selection might give a better result with Jews, Germans, Swedes, Italians, Irish, or some other nationality than with the English. We shall give illustrations

of this kind of selection in the next chapter. Here, however, the point is merely that whether we will or no, selection is going on and has been almost immeasurably accelerated by birth control. Our problem is to look into every possible clue that will ultimately help to cause the selection to be as favorable as possible.

In the rest of this chapter we shall confine ourselves to the northern United States and the West, that is, to the sections where New Englanders are numerous and where Negroes have been scarce until recently. We omit the South because Negroes formed about 38 per cent of the population there in 1800, and we do not wish to complicate our problem by introducing distinctions of color. In 1800 the people living in New England comprised 23 per cent of those in the entire United States and 46 per cent of those in the northern states. Many New Englanders, however, had already gone to New York, and even Pennsylvania and Ohio. Therefore the New England element must have formed at least a quarter of the entire population and half of that in the North. There were also other good racial stocks in the country—the Dutch represented by such names as Van Dyke and Roosevelt, Penn's Quakers, the Scotch Irish, the Huguenots, and the southern aristocrats from whom sprang such men as Washington, Madison, Carroll, Jefferson, and Lee. If there had been no post-colonial immigration and no previous bringing in of slaves from Africa, these likewise might have increased much more than has actually been the case. Since we are leaving out the South, however, we start with a population made up half of persons of New England descent and half of other English types, Scotch-Irish, Dutch, and so forth. For the sake of argument let us assume that all these groups were of approximately equal ability and value, and that they are

fairly represented by our sample of old New Englanders. If the reader doubts this assumption, he can easily make whatever allowances he chooses.

On this assumption, then, let us see how the people of the major part of the United States would differ from what they are now, if there had been no post-colonial immigration. We shall base our statements on the detailed facts in the Appendix. To begin with outward appearance, there would presumably be an easily noticeable difference. Blue-eyed and fair haired people would be more numerous—as numerous as they are in eastern England north of London, or in southern Scotland. The average stature would also be greater than at present. Our cities would no longer contain great areas where a large share of the people are short and have black hair, dark brown eyes, and brunette skins. Whether the population would be as well adapted as at present to our sunny climate is a question concerning which there is little agreement. The chief importance of the matter lies in the problem of whether blondness is an indication of any special types of mentality. Our studies seem to suggest that the blonder type is more prone to wander and to get on in the world than the darker types, but we do not attach great importance to this.

A more direct and practical question concerns the economic level that might be expected. The automobiles, telephones, and homes of our sample of old New England suggest an average buying power about a quarter greater than that of the native whites of the country as a whole. This in itself is no small thing. Let the reader consider what an increase of one fourth in his own income would mean. The objector may say that the descendants of the old colonial families would never have been so prosperous had they not been helped by the labor of those who came later. Against this,

however, may be set the contention that if the older stocks had been free from the burden of raising the standards of living of the new-comers and amalgamating them into the body politic, many forms of progress would have gone ahead more rapidly than was actually the case. It is almost impossible to prove which view is right. But try to estimate the effort of a single economic factor. Students of sociology generally agree that the ownership of homes is a social advantage. It gives people a sense of responsibility, makes them work harder, arouses in them a feeling of pride and loyalty in respect to their homes and their towns. It makes them look more carefully into problems of government, taxation, and reform. Moreover, it gives people a higher degree of financial stability in times of economic distress. Hence it would seem that if the percentage of home owners in the United States should be increased by half, as would happen if the whole population became like our Puritan sample, the country as a whole would be far better off.

The improved sociological conditions that would prevail in other ways, if the whole country became like the descendants of the Puritans, would aid the economic situation still further. They would also make life far safer and pleasanter. Even in times of normal prosperity the annual income of the United States is estimated to suffer a loss of ten or even twenty billion dollars a year because of crime alone. This includes not only the cost of caring for all sorts of criminals, but that of courts, police, prisons, lawyers' fees, loss and damage to persons and property, the safeguarding of property and lives, the wasted time of the criminals not only in prison but outside of it, and the constant expenditure of effort by the more stable elements of society in order to uphold their weaker brethren or undo the harm that they have wrought. It seems safe to say that twelve and a half billion dollars is a

conservative estimate of the real cost of crime each year. This means $100 per person, or $500 per family. But our New England sample shows less than half as great a criminal tendency as does the average population represented by the more common English names. If all the country were like the sample, the average annual income would be something like $300 greater per family from this cause alone.

Other forms of social inadequacy display conditions much like those of crime. One of these is the kind of inadequacy represented by people who go to Social Service Exchanges for help. This does not necessarily indicate deficient ability, especially in times of economic stress. Nevertheless, it is a great drain upon the resources of the community. This is true even if no financial assistance is asked, but merely help in settling some household problem such as a quarrel about rent, the care of a sub-normal child, or a search for work. Where financial help is also needed, the cost to the general public may exceed that of crime. Our study of old colonial names indicates that the descendants of the Puritans are only half as likely to be registered in the lists of social service exchanges as are the inhabitants of the country in general.

If people so relatively free from crime and pauperism comprised the entire population of the United States, instead of perhaps a quarter of it, as is now the case, the annual income available for the pleasanter things of life would be greatly increased. If we reckon the annual cost of both crime and social inadequacy as twenty billion dollars, we may consider that there would be a saving of ten billion if the old colonial type of people prevailed everywhere. In periods of economic depression such as 1933 when this book was written, the sum would be still greater. Saving bank accounts, investments, and general ability to withstand hard times would presumably be larger than now by ratios similar to those of home

ownership and the cost of automobiles. Thus not only would our standard of living be more than 25 per cent higher than now, but the ability to resist the shock of hard times would apparently be greater.

The economic improvement that might have occurred according to our hypothesis is a small matter compared with the corresponding social and moral improvement. With a population less given to crime and dependency a good share of the money, energy, skill and intelligence now devoted to purely remedial measures might have been devoted to prevention. Thus another good slice might have been added to the billions of dollars that we are supposed to have saved and to the 25 per cent by which our income per capita has been hypothetically increased. Far more important than this, however, is the greater safety, freedom, and joy of life that would come under such circumstances. Think of the difference if we knew not only that kidnapping, racketeering, bootlegging, vice, graft, blackmail, murder, and theft were as rare as in England, but also that misrepresentation of investments, unfairly pyramided corporations, and all sorts of financial gold bricks were equally diminished in number.

Perhaps we are too optimistic when we assume that such things might have happened if our early selected population had been left to people America unaided. The objector may admit that the population would contain a far higher percentage of people able to complete a college education. The data given in previous pages seem to prove this beyond question. But do these people have any higher ideals than the average? May not their very ability cause their evil doing to have unusually bad results? In the last analysis the answer to this and to related questions depends on our estimate of the value of three kinds of men who appear in unusual numbers among the descendants of the old colonial

stock. The first is business men of the type that get good ratings in Dunn, serve on many boards of directors, and are especially likely to be trustees of philanthropic, educational, and religious institutions. The second, which is relatively even more numerous than this type of business men, is professional men, especially college professors, authors, and doctors. The third, and relatively, although by no means absolutely, the most numerous, is distinguished people of the kind who are included in biographical dictionaries and encyclopedias. In respect to all three of these groups it should be added that a religious or philanthropic tendency is rather strongly apparent.

There are two views in respect to these three types of men. Some persons assert that religious and philanthropic people are just as dishonest, selfish, and even criminal as anyone else. They excel merely in being hypocrites. Your most unscrupulous business man, so it is said, becomes a trustee of a hospital or a vestryman in the church merely as a blind to hide his wickedness. It is also asserted quite vociferously that professors, journalists, and other professional authors are a doctrinnaire bunch who always mislead us. They have a wholly unwarranted influence simply because they are skilled in the arts of writing, talking, and getting publicity. Nor are the doctors without their detractors. Their insistence upon vaccination, sanitary inspection, and all sorts of other restraints upon personal liberty is assailed as a public nuisance which ought to be suppressed. Or else we are told that they depend largely upon mere guesses and a pleasant bedside manner, rather than upon accurate diagnosis and rational advice.

The ordinary thoughtful citizen rarely considers such talk judicious, or even sincere. He suspects that in many cases the people who indulge in it are merely jealous or somehow

unadjusted to this hard world. Of course there are fools and knaves in all professions, but the sensible man knows that, on the whole, religious and philanthropic business men are more reliable and unselfish than others. One has only to make an attempt to raise funds for some inconspicuous and unknown charitable purpose to find this out. The sensible man also knows that in spite of many mistakes professors and professional writers are responsible for a large share of the new ideas which lead to human progress. In the same way, although doctors make grievous errors, it is to these same doctors, helped by the professors, that we owe our increasing freedom from yellow fever, malaria, diphtheria, tuberculosis, Bright's disease, infantile maladies, bad teeth, and a multitude of other afflictions which formerly brought suffering and death to millions of people long before their time. The people mentioned in the encyclopedia may not be so important as is often supposed, but no sane man can doubt that they have done much more than the average to further human progress.

From all this it seems to be clear that if this country had a larger percentage of people like the descendants of the old New Englanders, or of similar people derived from some other source, it would also have a larger percentage of the far more limited kind who take the lead in advancing the cause of true civilization. Moreover, the obstacles to putting new ideas into effect would be much diminished because the people as a whole would be more intelligent than is now the case. This would give the country greater wisdom politically and socially, as well as economically. It would diminish the power of the demagogue and political boss, for such men batten on ignorance. High minded, wise, disinterested men like Governor Cross of Connecticut, that former professor and dean of Yale, who stands so solidly for the good of all

the people, would have a greater chance not only to get into high office, but to carry out their ideas. It is doubtful whether an institution like Tamanny Hall or the Republican machine of Philadelphia could have arisen in a community composed wholly of descendants of the old New Englanders, or of people derived from any one of a score of other equally good sources. Has not democracy failed among us mainly for lack of men who are both honest and able? There are indeed plenty of bad and stupid people among the old New England stock. There are also bad and clever ones who crop out sometimes in high places where they do untold damage. Nevertheless, the record set forth in these chapters seems to show that it would be much safer to entrust a country to men like those of early New England stock whom we have analysed in these pages than to the average of the country as a whole. It is certainly among them that we find the overwhelming majority of those who have led the march of progress. Thus it seems that if we had more such men, and fewer of the opposite kind, human progress would take place more evenly and effectively in all sorts of ways.

But wait a minute, are we not overlooking one very important matter? If our population should become more like the descendants of the old Puritans, would we not suffer seriously because of an undue proportion of white collar people and a terrible dearth of laborers? This question cannot be answered easily nor positively. Yet certain lines of reasoning seem clear. Wherever labor is scarce, it is well paid in proportion to its efficiency. When it is well paid compared with other occupations, it attracts a better grade of men. And when the level of the laborer rises, the respect in which he is held also rises. If our population all had a degree of intelligence like that which their educational records suggest among the descendants of the Puritans,

people too incompetent for anything except common labor would be scarce. Therefore the conditions would be like those of many frontier communities where the scarcity of labor leads to high wages and this in turn attracts good men. In that case the laborers would presumably be better organized, better paid, and more influential than now, as is the case in Australia. As time went on, however, the need for the less competent type of laborer as compared with the skilled workman would diminish. This is now happening, but it would be accelerated by the fact that according to our hypothesis inventions would be made even more rapidly than at present. We have seen that inventiveness is a characteristic of the old Puritan stock. A larger proportion of this quality in the population as a whole would mean that labor saving machinery would be even more prevalent than now. Hence jobs for people with very low mentality would diminish in number, whereas those for the skilled workers who keep the machinery in repair would increase.

The experiences of the great depression of 1929 to 1933 and of the preceding period of technological unemployment due to the improvement of machinery seem to indicate that the world's need of unskilled laborers is declining. Although persons of all kinds were in distress during the depression, the unskilled laborers lost their work in largest proportions. On the other hand almost every high executive is eagerly searching for young men who have brains and character enough to assume responsibility, and to be capable of leadership. The whole trend of our times seems to be toward substituting machines for unskilled labor, and toward requiring a larger proportion of highly skilled laborers to care for the machines and to work in service agencies like garages. There is also a rapidly growing demand for competent people in new occupations ranging all the way from business engi-

neers and research workers in great industrial laboratories, to experts in finance, foreign trade, salesmanship, recreational activities and such matters as agriculture and the great farmers' movement toward coöperation.

Most important of all is the fact that according to many wise observers civilization stands in deadly peril because it has become too complex. We have built up a marvelous mechanical technique. We can utilize power to almost any extent; we can talk in ordinary tones and be heard ten thousand miles away; we can travel a hundred miles an hour with perfect ease; we can make complex machines at extraordinarily low cost; and we are skilled enough so that we might supply the whole world's need of food and raw materials with only a fraction of the present workers. But with all this has gone an ominous increase in the complexity of life and in the demands upon our powers of planning and foreseeing. The farmer is no longer concerned merely with his own farm and the neighboring village. His welfare depends on what happens in Russia, Australia, China, Brazil, and many other countries. A scarcity or abundance of the crops there, the presence of insect pests, or the introduction of new products may make or mar his season's labor, and may radically change his standards of living. His prosperity also depends on inventors and manufacturers who may suddenly put on the market new machines that will cheapen production and throw hundreds of thousands of men out of work. Nor is this all, for tariffs, wars, cartels, and other circumstances far away may spell disaster or bring prosperity. Can any ordinary man understand all this and plan his course accordingly? What is true of the farmer is true with appropriate changes for everyone else. We live in an age when a man's success no longer depends solely on his own efforts, but upon a thousand circumstances over which he

has no control. Hence we need far greater wisdom than ever before.

The great danger of this new situation is that so few people can see it as a whole. Even if they had the facts, how many manufacturers have the brains to plan a wise course in relation to competitors at home, competitors abroad, new inventions, new fads, the changing prices of raw materials, the fluctuations in the financial market, the changing of tariffs, and the threat of wars? The political, social, economic, and technical organization of society has grown so complex that only very keen minds can understand it. Every day it is growing more complex. Yet the average ability of the people is declining rather than increasing. Nevertheless, we let our voters decide upon abstruse problems whose ramifications even the wisest cannot fully comprehend. Our paramount need is for vastly more people with keen and highly trained minds that can contribute something to the great plans which must be worked out for the future. Without such minds civilization will break from its own weight like a giant dirigible. What we need most of all is a higher, better type of mentality. Thus it seems that even though the old New England stock may be very imperfect, it is at least better adapted to the requirements of the new social order than is our present population as it actually exists.

Before we leave this topic let us come back to a subject upon which we may seem to harp too much. Some readers may think that in this book the authors glorify the old American types to which they themselves happen to belong. This has assuredly been far from our intention. Our aim has been to present the facts, both good and bad, exactly as we find them. Like everyone else we have had a certain training and are subconsciously controlled by it. Hence we undoubtedly see many facts in a light different from what

would be the case if we were Russians, Negroes, or Turks. This may account in part for our belief that the facts here presented can be reasonably interpreted only as meaning that the old New England stock is really different from the average of the people of the United States. Moreover, from the standpoint of our training and associations we cannot but believe that in most respects the country would be better if there were a larger proportion of this same sort of people. But the lesson to be drawn from this is not that we should try indiscriminately to increase the proportion of this old New England stock. There are plenty of its members whose absence would be a genuine boon. Moreover, the old New England stock is mingling with other types so fast that by the time any radical change in our racial outlook occurs its identity will almost have been lost. The lesson, as we see it, is that by proper selection the people of the United States as a whole, just as they are today, may give rise to descendants who possess unusually high qualities. Selection is the key word of this whole book.

If selection is to accomplish its full work it must be followed by segregation, or better still by continued selection from generation to generation. It is a common and very true saying of anthropologists that individual differences, even among closely related people, are far greater than the average differences between races. We believe that selection on the basis of these individual differences is the reason why the New England type stands out so conspicuously. But since the selection occurred mainly in a single generation, segregation of the selected people was absolutely essential to permit them to develop their individuality. If this process of selection and segregation could produce desirable results once, it can do so again. If it could produce desirable results by selecting certain persons among the people of eastern

England three centuries ago, there is no reason why it should not produce still better results if a more rational system of social selection in each successive generation can be devised here in the United States today. It should be applied to every class of society, for high qualities are found everywhere. In a word, our great need is some reliable method of increasing the number of high grade people of all sorts, no matter whether they are competent, reliable farmers; faithful, thrifty laborers; alert, honest, high-minded clerks; or business executives and professional people with sound common sense, kindly, honorable and public spirited dispositions, and the brilliance and persistence that combine sometimes to make genius. The people of these various kinds may be Jew or Gentile, old immigrant stock or new, blond or brunette.

The most effective way of insuring the proper selection is apparently to see that in each generation those who already approach more or less closely to this ideal have relatively large families, and that those of their children who are of similar quality be encouraged to marry others of the same high types, and to have more than the average number of children. This implies that methods of regulating the size of families must be as well known and easily available to the lowest classes as to the highest. It also implies that somehow it must be made personally profitable for the superior types to have many children and for the inferior types to have few. Only thus will either group produce the number of children commensurate with the best interests of society. We have already seen that at the social levels where the knowledge of birth-control is universally disseminated there seems to be a tendency for the more competent people to have the larger families. How far down in the scale this continues to be true we do not know. We believe, however, that at any

social level, if birth control becomes easy enough the more selfish, inefficient, and ease-loving elements will be the ones to have the least children, aside of course from those among whom there are genuine biological reasons for childlessness. If self interest still fails to limit the families of the inefficient, stupid, and weak willed, we see no alternative except forcible segregation and prevention of marriage, or else sterilization. On the other hand the experience of the past suggests that if the economic and social pressure due to immigration and the rapid increase of the less efficient types of people were eliminated, the finer elements at all levels of society would tend to increase the size of their families. As the importance of the selection of the right kind of people for parenthood is more fully realized, and as its influence upon the future of our country becomes better understood, we feel confident that many new methods will be devised in order to insure a sufficient number of children among the more valuable elements at all levels of society.

Chapter XI

THE POWER OF SELECTION AND SEGREGATION

IT IS a far cry in both time and space from the future of America to the origin of the Maoris, Parsees, and Icelanders. In the realm of thought, however, it is but a single step and a very necessary one. In this book we have been led by the descendants of the Puritans to a fundamental theory as to the function of natural or social selection in giving rise to strong stocks and to advances in civilization. The theory is by no means based entirely on the New England Puritans. It has its roots in many other widely scattered examples. Therefore in order to round out the thought of this book and give it full force, we need to examine some of these other cases. This, then, is the reason for devoting a concluding chapter to the Maoris of New Zealand, the Parsees of India, and the Norse of Iceland. Each of these groups stands remarkably high in view of its geographic environment and general type of culture. In each the original group from which the present inhabitants are descended was rigidly, although more or less unconsciously, selected, and has since been segregated geographically or socially. Thus the original biological inheritance still persists, and the *mores* of the people have been allowed to develop with relatively little outside interference. In each case a relatively high level of achievement and character has been maintained quite steadily for hundreds of years.

The Maoris are the native people of New Zealand. They are of Polynesian stock like those of Samoa, Tahiti, and other

islands of the Pacific Ocean. Alone among the people of this racial group they today meet the white man on practically his own level. A hundred years ago or less, when New Zealand was newly settled, they fought the British so vigorously that if they had been equally well armed the conflict might have resulted in their favor. Their chiefs saw, however, that further fighting was useless. It was better to make terms with the fair-haired people from beyond the sea, and learn how to utilize their new devices. So an equal peace was made. Since then the Maoris have gone their way side by side with the white men. They retain many of their own customs, but see the advantages of education, sanitation, and modern improvements, and are fast adopting them. Their position originally was like that of our Indians, but no Indian group in North America has held up its head in any such way against the white man. In some respects the Araucarian Indians of southern Chile are similar, but they do not seem to show such great ability.

How people feel about these selected Polynesians may be judged from a remark made by a Yale professor after hearing a lecture by Dr. Peter Buck. Dr. Buck is a well known anthropologist who had an Irish father and a Maori mother. He grew up among the Maoris. Today he is so distinguished that he was called first to Hawaii to the Bishop Museum and then as a visiting professor to Yale. In his lecture he told of the way in which the Maoris adapted themselves to a difficult new environment after their migration from Tahiti about six centuries ago. He explained their elaborate methods of defense, their customs and ideals, and their persistence in maintaining their own individuality in the face of the new western civilization. He ended by reciting some superb bits of imaginative and descriptive poetry which form part of the Maori cultural inheritance. When the lecture

was over the Yale professor remarked: "Ordinarily you feel sorry for a man who is half Negro, half Hindu, or half some other race like that, but you don't feel at all sorry for this man. You merely admire him." Of course Dr. Buck is an outstanding figure, but there have been many other able Maoris for whom the British leaders in New Zealand entertain the highest respect.

What then, is the secret of the ability of the Maoris? It must lie in one of three things—the physical environment, the cultural inheritance, or the biological inheritance. The senior author of this book is primarily a student of physical environment. He has been accused again and again of attributing everything to climate. He would cheerfully except the accusation if the word "everything" were changed to "a great deal." He is convinced that no race or nation has ever risen to the first rank except in a climate well adapted to *the particular stage* of human culture reached by that particular group of people. He believes that today the general distribution of civilization harmonizes closely with the general affect of climate upon physical health and mental activity. Hence he attaches a good deal of weight to the fact that New Zealand has one of the world's most healthful and stimulating climates. If everything else, including both people and resources, were everywhere the same, he would expect the inhabitants of New Zealand to stand close to the top in activity and progress because of their good climate. Nevertheless, he believes that biological selection has been at least as potent as climate in giving the Maoris their present high level.

The history of New Zealand begins about eight hundred years ago. At that time the North Island, then probably uninhabited, was settled by a few Polynesians who accomplished the astonishing feat of sailing thousands of miles in

little open boats propelled by sail and paddle. The main migration of the Maoris, however, did not occur until about 1350 A.D. At that time political troubles were rife in Tahiti. According to one tradition there was also distress because typhoons had destroyed many bread fruit trees. A combination of such conditions finally led some of the younger chiefs to decide on a migration. New Zealand was chosen as the goal, even though it was more than 2500 miles distant. Canoes were equipped not only with food, but with seed and other provisions for colonization. Crews were picked from the bravest, most intelligent, and strongest of the people. According to the tradition handed down for many generations, they were men who not only had strong backs and arms with which to wield the paddle, but good heads full of sound judgement and of the memory of what the old men had related. Only such could find a goal more than 2500 miles away which no living man of Tahiti had ever seen.

These selected men, with some of their women, came to North Island. They appear to have largely displaced the few Polynesians of the earlier migration presumably killing many and taking their women as wives. At any rate all modern Maoris trace their descent from one or another of the canoes belonging to this later migration of the fourteenth century. Thereafter no further appreciable migration seems to have reached New Zealand until the coming of the white man. The Maoris who were there when the white men arrived were all descended either from these especially selected migrants, or from their few forerunners who were probably equally hardy.

In New Zealand the new settlers had no easy time of it. Although the climate is excellent for human health, it is not good for the staple products on which the Polynesians had

been accustomed to live. It is too cold for the bread fruit tree, and the taro will grow only with special care in a few places. The sweet potato grows in a wider area, but many of the Maoris lived in parts of New Zealand too cool even for this. New Zealand has no indigenous edible grains or vegetables. Hence among many of the Maoris almost the only article of vegetable diet, aside from a few greens, was the rhizomes of certain large ferns or bracken. On the seacoast fish and shell fish were staple articles of food. The inland people snared birds and the fruit-eating rat, caught fish and eels in the lakes and rivers, or gathered crayfish and fresh water mussels. But distress and famine were all too common, and life must have been very difficult, especially at first.

Among people of weak intellect and unenterprising temperament such conditions lead to stagnation and retrogression, as probably happened with the Indians of California. With people of stronger intellect and great determination they lead to new inventions and progress. That is what happened in New Zealand. The Maoris brought with them a culture identical with that which prevailed almost unchanged in the warm tropical islands of the Pacific up to the coming of the white man. Under the stimulus of their new environment these competent people rapidly altered this old culture by evolving many new habits. Living as they did a more or less communal life, according to the Polynesian habit, the Maoris worked out new, although elementary, methods of coöperation and of division of labor. The men did the more difficult work such as climbing trees, carving tools and weapons, fishing and trapping, and breaking up the ground for agriculture, which was no easy task among people without metal tools. The men also spent much time in fighting, and became great experts not only in hand com-

bats, but in strategy and the art of ambuscades. The women tended the crops, collected shellfish, and plaited mats and clothing from the New Zealand flax. Of course they also cooked, preparing two meals a day. In many industries there were specialists who underwent a definite course of training, which included a knowledge of the magic needed in each occupation.

Social life was also highly developed. Visits were common; there was much friendly as well as hostile rivalry between neighboring tribes. Sometimes other tribes were invited to feasts where the amusements consisted of wrestling, the spinning of tops, the throwing of darts, and posture dancing. Of course they were rough, rude, and quarrelsome, and even practised cannibalism, but such things were the natural result of the prevailing stage and type of culture. They do not alter the fact that the Maoris were peculiarly progressive and competent. The essential point is that in no respect did the Maoris permit the lack of physical resources to depress their cultural level below that of the warmer Pacific Islands where life was easier. On the contrary their innate ability, together with the stimulating climate, led them to meet the difficulties of nature and overcome them, thus steadily raising their cultural level. Whether average Polynesians would have done the same thing, or would have been foiled by the difficulties of the new environment we cannot tell. But this much seems certain, if the Maoris had been a less selected group they could scarcely have made so much progress and would not now be so conspicuously successful among the people of their race and culture.

The Parsees of India present a similar example. The New York Times for June 4, 1932, contained the following dispatch from Europe: "Sir Dorabji Jamseti Tata, head of

the Tata Companies, the largest Indian industrial organization, and founder of the Indian steel industry, died today in a sanatorium in Bad Kissingen, Bavaria (at the age of 71). . . . After leaving Cambridge he became one of the leaders of the social and commercial life in Bombay, his companies being engaged in structural work and in operating hotels, spinning and weaving mills, oil mills, cement works, and power stations. Just before he left Bombay in April to undergo medical treatment in Britain, Sir Dorabji signed a trust deed worth 2,250,000 pounds sterling, mainly for charitable purposes. . . . He created and endowed the Indian Institute of Science and endowed engineering laboratories at Cambridge University, of which he was a graduate. He also established numerous scholarships for research work in diseases regarded as incurable. Sir Dorabji and his wife spent the autumn of 1927 in the United States. Although his company had maintained an office in New York for forty years, it was his first visit. He wore the usual clothes of a travelling Englishman and spoke English perfectly. In religion he remained true to the fire worship of his sect, the Parsees. According to his modest explanation, his knighthood, awarded in 1910, was a posthumous honor to his father, Jamsetji Nuservanji Tata, who had wrought vast improvements in Bombay by installing hydroelectric power."

Who are these Parsees? How does it happen that this Indian Rockefeller, who was a fire worshipper instead of a Baptist, not only did great things in his own country, but actually endowed laboratories at England's great University in Cambridge? In our ignorance we often look down upon the people of India, but here is one whom even our most modern and materialistic business men cannot help admiring.

The word "Parsee" is the same as "Persian." Long ago at the end of the sixth century of the Christian era, the

Zoroastrians, or Fire worshipers of Persia, had been through a period of great distress and commotion because of a war of a hundred years with Rome. In the next century the Arabs, under the powerful spur of their new Mohammedan religion, invaded the country and sounded the death knell of Zoroastrianism. Nominally the old religion was allowed to survive, but a large part of the Persians forsook it, and persecutions arose at frequent intervals. In 651 A.D., on the fall and death of Yazdegerd III, the last Sassanid king of Persia, a number of people who were still faithful to the old religion "abandoned their houses and gardens and palaces for the sake of their religion," as the old chronicle puts it, "and lived in Kohistan for a hundred years." There, too, they suffered persecution, for the Moslem Arabs now ruled the land. So the Zoroastrians, to quote the ancient chronicle again, "became anxious for their religion," and in A.D. 751 moved to the city of Hormuz on the shore of the Indian Ocean. There they lived for fifteen years, but being harrassed by the Arabs, they finally set sail for India. How many thus migrated we do not know, but certainly the number was not large. They landed at Div, on the shores of Kathiawar, just east of the mouth of the Indus, but were not welcome. So after nineteen years of friction with the native inhabitants they sailed eastward to Gujarat and reached Sanjan in 785. There they were allowed to form a permanent colony, with liberty to follow their own religion, provided they adopted the language and customs of the country, but formed a caste of their own. Later they migrated to Bombay, where most of their one hundred thousand people now live.

From this account it is evident that the Parsees went through a very drastic process of selection, like that of the New England Puritans, but much more severe. In the very beginning, when the Mohammedans invaded the country, it

took great courage and determination to cling to the old religion. Yet some of the Parsee did so, apparently from a genuine conviction that the old was better than the new. During the century and more between the first coming of the Arabs and the final settlement of the Parsees in India many of the less resolute must gradually have fallen away to Mohammedanism, for that is always the case under such circumstances. The deathrate, too, must have been very high when the whole community had to move as persecuted refugees from one section to another in their own country and even to another country. We have no record of this, but it is always true under such conditions. Thus the small remnant of the Zoroastrians who finally settled near Bombay had gone through a most drastic selective process in which moral courage, intellectual activity, and physical endurance all played an important part. Moreover, this highly selected remnant did not come from among the peasants or the common people, but from among the upper classes, just as happened among the Maoris. We are specifically told that the Parsees came from among those having houses, gardens, and palaces, and from those who either practised various handicrafts, or were leaders in the life of the community.

From their arrival in India until now the Parsees have occupied an outstanding position. Today in proportion to their numbers they are generally recognized as the most competent people in all India aside from the British. They number only about a hundred thousand, but many of India's most eminent men are among them. They are largely merchants, and very successful ones, but are keenly interested in literature and science, and in preserving and purifying their old religion. Theirs, indeed, is practically the only religion in India, aside from Christianity, which actually inculcates and insists upon a high moral code, and upon true

altruism as well as mere hand to mouth charity. Crime and poverty are almost unknown among the Parsees. If any fall into straits financially they are helped by their richer brethren, but the general level of prosperity is high. In spite of their small numbers the Parsees have furnished leaders in many lines including literature, philanthropy, and politics as well as business. Two such leaders are the only natives of India ever elected to the British House of Commons. It is no small tribute to a man to be chosen in that way by a British constituency. Another Parsee, who migrated to China, founded the University of Hongkong. Sir Dorabji Tata, with whom we introduced the Parsees, by no means stands alone. The Parsee women, too, are freer and more respected than those of any other social group of people in India except the British. The girls, as well as the boys, are better educated than those of any other native caste or race of India.

In the case of the Parsees the influence of a highly selected heredity seems to be even stronger than in that of the Maoris. Instead of being helped by their geographic environment they have been hindered by it. They went from the fairly cool uplands of Persia to the hot and debilitating climate of India. The natural effect would be to cause them to be less active than formerly. In spite of this, however, they have retained remarkable activity for eleven and a half centuries. This does not mean that they are as active as the Danes, for example, but they go about their work with far more energy and persistence than do the vast bulk of the Hindus around them. The mere quality of their culture, when taken by itself, does not seem capable of explaining this. Many other groups which started with the highest of Christian, Jewish, or other fine types of culture have degenerated under circumstances more favorable than those surrounding the Parsees.

On the other hand the Parsees have gone steadily forward and have in many ways evolved a new culture. Today their religion is practically monotheism, quite unlike the dualism of the older Zoroastrianism. Their methods of education, charity, and public control in questions of morals have evolved greatly since they first came to India. This same tendency toward further evolution is seen in the fact that they alone among the communities of India not only recognize that modern times present new problems, but have actually done something about it. They employed a British expert to make a study of themselves and their institutions in order to determine how well they are adapted to the needs of modern civilization. They are still studying this problem actively.

From all this we conclude that the Parsees afford an uncommonly strong illustration of the way in which a good biological inheritance promotes human progress. It tends to carry with it an improvement in culture. If these two, that is, a good biological inheritance and an improved culture, are coupled with the best kind of physical environment, we have the ideal conditions for progress. In this last respect, however, the Parsees have been hampered. So far as biological inheritance is concerned, the salvation of the Parsees appears to have been the fact that they have kept themselves unmixed, although completely surrounded by Hindus and Moslems. The caste system of India has helped in this respect, and so have the strict rules of the Parsees. Although their women are more free than others in India in one sense, they are very carefully protected, and marriage of either Parsee men or women with other castes has till recently been strictly prohibited. Not even if other people wish to become Parsees has it been allowed. Some years ago a Parsee married a French lady who was ready to adopt the religion

of her husband. The Parsee officials, however, after long argument, decided that although the creed of Zoroaster theoretically admits proselytes, their admission is not consistent with the present practice in India. Any one who marries outside the faith ceases to be a member of the Parsee community. Since this decision was made the rule has been somewhat relaxed, but apparently the non-Parsee marriages are chiefly among the most intellectual classes who marry people of their own type. Free intermarriage of the Parsees with the rest of the people of India would seem to be a serious mistake, unless it were possible to enforce a rule requiring that marriages be contracted only with persons who may reasonably be supposed to bring real improvement to the biological inheritance of the Parsees.

In conclusion we turn now to Iceland for a third example of high qualities resulting from the selection and segregation of competent people. One of the most interesting things to be explained in Iceland is the contrast between the poverty of the geographic environment and the remarkably progressive character of the inhabitants. The interior of Iceland consists mainly of bare snowy mountains, rough lava flows, and barren wastes of gravel. Only the narrow plains around the coast are low enough and warm enough to have a cover of green grass. But trees and crops are almost absent. Here and there in the grassy plains low one-story houses of stone and peat are surrounded by barns for hay, and by flocks of sheep, smaller herds of cattle, and a few shaggy ponies. Perhaps there is a tiny patch of potatoes and turnips beside the house, but nothing else suggests any occupation except the making of hay and the care of animals. A few rough roads and trails cross the country, but vast areas do not show even these traces of human occupation. Here and there a hamlet surrounds a church, a school, and a store, but

only on the coast are there any real villages or towns. Even these are merely fishing villages with little hint of any occupations except those connected with boating, fishing, and the supplying of the simple needs of fishermen and herders. Even the one real city, Reykjavik, with nearly a quarter of the Icelanders, is a village-like place of only 25,000 inhabitants. Its low houses generally stand separate from their neighbors. There is no manufacturing section in our sense of the word. The city is merely a center for the commerce, trade, and government needed by a poor but thrifty population of a hundred thousand souls who have practically no primary occupations except fishing and herding. The cool summers, the lack of resources, and the isolation make anything else impossible.

In spite of all this, Reyjavik is one of the most active intellectual centers of its size in the whole world. It has a remarkably full complement of schools, libraries, museums, and other intellectual organizations. The people as a whole, both in the city and outside it, are surprisingly well educated and intelligent. Nor is this any new development. A thousand years ago in their great Sagas the Icelanders wrote some of the greatest literature of all time. Men like Lord Bryce, author of that great work *The American Commonwealth*, say that aside from the writings of the early Greeks no other primitive literature is so extensive or of such high quality. For hundreds of years the Icelanders maintained the highest of all forms of government. They had no executives because the people themselves, by force of public opinion, compelled obedience to the law. If the annual assembly of the representatives of the people, acting as both a law making body and a court, decreed that a certain man should be exiled, pay a fine, or otherwise make redress, the man forwith did as he was ordered with no police or other officers to compell

him. It is hard to find any other country where the general standard of education and of political honesty has continued so high for so long a time, and this, too, in spite of the direst poverty and disaster. Nor has any other country in proportion to its population given to the world so many eminent leaders like Thorwaldson, the sculptor, and Stefansson, the Arctic explorer. A detailed study of the persons mentioned in the Encyclopedia Brittanica brings this out most clearly, as the senior author has shown in *The Character of Races.*

When we attempt to analyse the causes of this widely recognized superiority of the Icelanders, the problem is almost identical with that of the Maoris. The Maoris, to be sure, migrated to one of the world's best climates, whereas the Icelanders went to what many people suppose to be one of the worst. But the difference is not so great as might be supposed. The New Zealand summers are so cool that agriculture according to any methods that were then possible for the Maoris was very difficult and restricted. The excellence of the New Zealand climate, so far as the Maoris were concerned, lay mainly in its healthful and stimulating effect upon man. In Iceland much the same is true. Surprising as it may seem in view of the latitude, the winters on the Icelandic coasts are warmer than those of New York or St. Louis, and in some parts they are as warm as at Washington. Temperatures much below freezing are rare on the southwest coast. This means that for many months before and after the coldest period the inhabited coasts of Iceland have weather of the kind under which we find the greatest mental activity in the United States. Studies of students' marks, civil service examination, and patents all indicate that people's minds are most alert in cool weather when the temperature is just low enough so that there are occasional frosts at night.

The trouble with the Icelandic climate is the summers, not the winters. In order to find summers as cool as those of Reykjavik, one must go to Northern Alaska, or the North Cape region of Europe. Such summers do relatively little direct harm to the Icelanders, but they do immense harm indirectly. Only at low altitudes near the coast is the summer temperature high enough for any vegetation except Arctic lichens and mosses. Near the coast the small lowland plains are beautifully green with grass, or gay with flowers throughout the summer. There are practically no trees aside from little birches and willows five or ten feet tall which grow in the more protected valleys. In the tenth century, however, when the Viking ancestors of the present Icelanders came to Iceland, the climate appears to have been a little better than now. At any rate the ancient accounts seem to indicate that the early settlers raised rye, used timber freely in building large houses, and constructed wooden ships of considerable size. Some wood for such purposes may have been brought from Europe, but an ancient book of records names specific parts of Iceland where large trees grew. In our day, on the contrary, repeated attempts to raise grain of any kind, even barley, have failed. The climate must have changed a little. From all this we conclude that the Icelanders, like the Maoris, migrated to a region where the climate made life harder than in the old home, but where it also was highly conducive to both mental and physical activity on the part of the people.

From the standpoint of cultural advantages it is hard to see any reason why the Icelanders should have kept pace with the Scandinavians of Europe, and should even have excelled them in the production of men of genius. The migration of the Icelanders to a new and uninhabited region with resources much smaller than those of the old country

must have meant a set-back in the conveniences and amenities of life. Norway in those days was crude enough, but these frontier people with no established homes and with new and difficult modes of getting a living must have been still cruder. Moreover, in later days, especially in the fourteenth, seventeenth and eighteenth centuries, they suffered almost unparalleled natural calamities. Unusually cool, wet, foggy summers were frequent. Fishing, which was always one of the main occupations, became more dangerous, and less remunerative. Voyages to Europe were also rendered more difficult, and thus the isolation which always tended to keep Iceland backward became still more pronounced. The summers were so wet that it no longer paid to attempt to raise grain. Worse still, the constant moisture caused the hay to rot in the fields. So tens of thousands of sheep and cattle died during the winter. Half of the animals perished in this way at certain periods. Trees apparently no longer grew to useable size. The large, decked luggers of the old days gave way to small, undecked fishing boats, thus still further increasing the isolation of the island. The fine carved and painted halls of the old heathen days were replaced by turf-walled barn-like houses half sunk in the earth and almost windowless to keep them warm in winter. The very art of using timber was lost. The houses were dirty and the air foul not only from the lack of ventilation but because the herders were always tracking manure indoors.

In addition to all this, terrific volcanic eruptions and earthquakes have repeatedly added to the difficulties of life and depressed the cultural standards. By 1402 not only had these standards fallen far below their old level, but the population had also greatly diminished. Then a recurrence of the Black Death is said to have killed two thirds of the remaining people. In 1759, volcanic eruptions and wet foggy summers

caused a famine in which 10,000 people died. In 1762 disease was so rife among the sheep that 280,000 died or were slaughtered, which probably means fully half, for there are less than 600,000 now. The people also suffered from epidemics. A few years later, in 1783, a terrible volcanic eruption destroyed 53 per cent of the cattle, 77 per cent of the horses, and 82 per cent of the sheep that were left. A third of the people probably met an untimely death within a quarter of a century.

Such conditions have kept Iceland in poverty. They have made many visitors scornful of the mean and dirty Icelandic mode of life. But they have never quenched the spirit of intellectual activity. Nor have they been more than a temporary bar to the highest kinds of cultural progress. This little group of poverty-stricken people, never numbering over 100,000 souls, and at some periods only a third as many, taught their children at home so that they might read and write. They read the old Sagas and even books in Latin. The common recreation during the long winter evening has been for someone to read aloud. These few people brought the printing press to their poor and isolated island and began printing books in 1530, only 23 years after the first book was printed in Scotland. Norway did not print any books till 1651, but Iceland, with only 50,000 people, printed about 50 before 1600. In our own day the Icelanders, in spite of their very scanty natural resources, still keep pace with modern inventions and discoveries. They now make hay with machines instead of by hand. They have begun to harness their waterfalls and use electric power to manufacture the wool of their sheep instead of sending it raw to Europe. By means of power boats they now catch fish more abundantly and safely than of old. They have introduced modern sanitation and have reduced their death-

rate as much as have the most advanced countries. They are experimenting with progressive types of social legislation in somewhat the fashion of New Zealand. Although they still number but a hundred thousand, they publish splendid scientific monographs and maintain all sorts of scientific, historical, literary, and educational institutions. Since it is difficult for the more remote children to reach school, the government has established peripatetic schools that move from place to place.

Such persistent progress in the face of such grave difficulties is possible only among people of high moral and intellectual caliber. The historic facts indicate that these high qualities among the Icelanders are the result not only of an admirable system of training, but of an inborn biological inheritance of high capacities. The Icelanders belong to the tall, fair-haired, long-headed, blue-eyed Nordic race. The migration of their Norse or Viking ancestors from Norway about 870 to 930 A.D. illustrates the way in which geographic, biological, and cultural conditions combine to produce what are commonly called racial characteristics. In Norway during the ninth century of the Christian era three events encouraged migration. Two were geographical and one political, and all three are closely parallel to what happened among the Maoris. One of the geographical events was the discovery of Iceland by the Scandinavians. This island was already known to the Irish, but the Vikings had not heard of it. The second geographic event was a series of cool, wet summers which injured the crops and made people feel very poor and discontented. Unfortunately we know little about this and cannot tell how important it really was. The political event was that a king called Harold Fairhair imposed his rule upon numerous minor Norwegian chieftains who hitherto had been entirely independent. He

made them pay taxes and assist in his wars. This was especially distasteful at a time of such poverty. The poor crops and political unrest combined with the energetic character of the Vikings to encourage two kinds of emigration. One set of Vikings, whom we know as the Norsemen, sailed forth in their open wooden boats and plundered the coasts of Europe from Scotland and Germany to Spain. Some settled in England, and others in France where they gave their name to Normandy. Other Vikings of a more thoughtful and peaceable type asked themselves, "Why waste our energy in fighting when there is a good land off to the west with no one in it? We will settle in Iceland so far away that no king will bother us."

The immigrants to Iceland were of high caliber because of two kinds of selection, mental and physical. They came largely from the more able and energetic parts of the Norse population. They consisted not only of people who chose peace rather than war, but of families whose ability had enabled them to become chiefs and leaders. These leaders selected part, but not all, of their followers to go with them, and we may be sure that they chose the bravest, most hardy, and most faithful. Thus the mental qualities of the settlers must have been high on an average.

A dangerous, difficult migration of this sort in open boats across stormy seas to an inhospitable land also means a drastic physical selection. Even though those who are obviously weak have been left behind, others succumb because the voyage and the life in the new land while homes are being established is too hard for any but those with the strongest constitutions. The women and young children suffer especially. It will be remembered that half the people who came over in the Mayflower were dead within a year. During that sad period thirteen of the eighteen married

women were laid in unmarked graves, and most of them were young. Only the physically strong survive among the pioneers in a new and difficult land. Hence, although no records are available, we may be sure that the early settlers in Iceland suffered similar losses. This was good for future generations, for it meant a drastic physical selection in addition to the mental selection already described. After the first migration, which was completed within 60 years, the isolation and poverty of Iceland prevented new settlers from coming. Hence for a thousand years the Icelanders have been the descendants of these selected emigrants and have had an unusually good inheritance both mentally and physically.

The close parallelism between the histories of the Maoris, the Parsees, the Icelanders, and the early New Englanders appears to be highly significant. In each case we have the same story of mental and physical selection, followed by segregation, and leading to prolonged periods of high achievement. Many other similar cases could be cited, although as a rule the facts are not so clear. The Brahmans of India appear to have maintained their leadership for two thousand years not merely because they have had more opportunities than the other castes, but because they have inherited more alert minds. The Athenians in their day of glory were a selected biological group which kept itself rigidly unmixed. The opposite type of selection is also found, especially in small local units. In certain New England villages and Appalachian valleys, for example, people of low mentality have been segregated, and civilization has declined.

From this excursion into far lands and other times we come back once more to the Huntington family and the large group which it represents. The achievements of these descendants of the Puritans may seem great or small ac-

cording to the individual viewpoint of the reader. There can be little question, however, that they differ from those of the average American. The difference lies largely in a greater development of intellectual, philanthropic, and religious activities; in greater economic stability and comfort; and in comparative freedom from dependency and crime. It is generally agreed that such conditions promote high civilization. They are characteristic of other selected groups like the Maoris, Parsis, Icelanders and others when these are compared with less highly selected people in a similar stage of culture. Thus the selection and segregation of especially fine types of people seem repeatedly to have fostered a marked advance in civilization. The same result can be obtained by repeated selection of desirable types in each generation. It can also be obtained by modifying the social system so that the more desirable types of families systematically have more children than do the less desirable types. In a civilization like ours this is the method from which we may reasonably expect great results.

From all of this we draw the conclusion that one of the greatest factors in molding the future of mankind is going to be a further change in the relative birth-rates of various types of people. We do not yet know the exact method by which individual human traits are inherited. Nor do we know exactly what types of people are best. We know very well, however, that certain types of laborers, farmers, merchants, professional men and others are far better citizens than others. The pages of this book seem to show that when families of this type intermarry these good traits crop out for generation after generation. Human habits are changeable. Therefore we believe that it is possible to build up new customs which will in due time make it comparatively easy and wholly "the thing" for the more competent and

reliable people to have relatively large families. Social and economic pressure, on the other hand, will make it to the advantage of the less competent to restrict their families. This seems like a great change, but already it is beginning. In a few generations it may radically alter the character of our people. In the past the world has seen the great revolution whereby political power has passed more or less into the hands of the people. In our own day the great technological revolution due to machinery has altered the face of civilization almost unrecognizably. A social revolution seems also to be impending and there is no knowing how far it will go. In the dim distance loom faint outlines of something still more fundamental—a biological revolution which will change the human mongrels of today into genuine thoroughbreds.

Appendix A

GEOGRAPHY AND MIGRATION

This Appendix and those that follow contain tables showing the detailed results of the study of the Huntington family. The tables form the basis of much that is said in the main part of the book, and are summarized in Chapter VIII. Further comments are here added. The rate at which our sample family spread over the country may be judged from the fact that up to 1810 it was still almost limited to New England, New York, and eastern Canada. The number of births recorded in the Genealogical Memoir from 1801 to 1810 is as follows: Connecticut 126, Vermont 81, Massachusetts 34, New Hampshire 20, Maine 7 (total for New England 268), New York 71, Nova Scotia 10, Canada East 8, North Carolina 1.

In connection with later migrations it is interesting to inquire why this typical New England family is especially numerous in certain localities. It claims 80 or more members per million inhabitants in five distinct areas. Connecticut stands high because it was the permanent home of the two original brothers who had the most children. But the proximity of New York City and the pleasant character of the suburbs in Connecticut tend to attract people of this sort among whom fully half in the New York region are professional men or business executives. A still larger proportion of Huntingtons is found in northern New England, especially Vermont. This does not necessarily mean that the old Puritan stock has increased there faster than elsewhere, although such may be the case. It may merely indicate that the growth of population through immigration has been slow, and therefore the old stocks form a large percentage of the total. Farther south many of this family are found in Washington because that city has a special attraction for what we often call middle class or upper middle class people. In Utah and Wyoming quite a different situation gives rise to a similar high percentage of Huntingtons. Only one family of this name appears to have been converted to Mormonism. That was in 1833 in western New York. In 1845, after much persecution, this family reached Utah. There its numbers have increased in normal fashion except that the recent reduction in the size of families, which has been so

pronounced elsewhere, does not seem to have influenced the Mormons. The nine families for which we have data in Utah and Wyoming contain 55 children, or an average or more than six apiece. This is like the families of a century of more ago. It agrees with the results obtained by I. N. Batts and Lowry Nelson in a study of 855 parents in two small towns of Utah where all sorts of other occupations as well as agriculture are represented. As reported in the *Journal of Heredity* they found an average of about six children per family. If the families elsewhere had maintained

TABLE 1

Changes in number and quality due to migration of Huntingtons

(Based on all available records of adult men and women)

	A	B	C	D	E	F	G
	PERSONS LIVING HERE	PERSONS WHO HAVE MOVED AWAY	PERSONS COMING FROM ELSEWHERE	GAIN OR LOSS BY MIGRATION	PERSONS LIVING HERE PER HUNDRED BORN HERE	FIELD WORKER'S ESTIMATE	GAIN, OR LOSS, IN FIELD WORKER'S ESTIMATE
East Coast Industrial Section.	407	53	152	+99	132	3.34	−.02
Pacific Coast.....	230	2	140	+138	250	3.25	+.09
North Central States.....	406	160	72	−88	82	3.00	−.04
South.....	92	35	47	+12	115	2.94	−.39
North Appalachian Section...	288	136	34	−102	72	2.69	−.15
Rocky Mountain States.....	64	15	22	+7	112	2.63	+.12

their former size in this same fashion, the number of persons of old New England stock in the entire country would be about two and a half times as great as now.

The Pacific Coast, with its numerous dots in Figure 1, represents conditions almost the reverse of those in Utah, but yet leading to a similar result. The reason for the growth of this part of our Puritan sample has not been large families, but active migration. The average number of children in completed families of the three Pacific states is only 3.5 against 6.1 in Utah, and would be only 3.3 if one family of 14 were omitted. The Puritan stock has apparently become numerous on the west coast because pros-

perous people with the pioneering spirit are the type most likely to be attracted thither by the climate and opportunities. The case is something like that of New York and Washington, where this type of person is numerous because of the drawing power of favorable opportunities.

This raises the interesting question of the effect of the recent migrations of the Puritan stock upon both the quantity and the quality of the population in different parts of the country. So far as mere numbers go the case is very clear, as appears in Table 1 showing how many Huntingtons live in certain sections and the net gain or loss of people of this kind through migration.

The upper line means that 407 adults named Huntington now live in the East Coast Industrial Section; 53 who were born here have moved away; and 152 who were born elsewhere have moved in. In other words, this section has gained 99 adults (column D), and now has 132 for every hundred who were born here (column E). The fact that in column D the losses do not balance the gains arises from the fact that the gains include immigrants, mainly from Canada and Great Britain, many of whom are wives. The Field Worker's estimate of those who now live here is 3.34 (column F), which is only 0.02 lower than her estimate of those born here (column G). Hence, not only is the East Coast Industrial Section gaining rapidly in the number of Huntingtons, but the quality of the newcomers is practically identical with the high quality of those born here.

In connection with column F it is interesting to note that the Field Worker unconsciously assigned the men to the various ranks in about the proportions that would be expected on the basis of general probability. The women, however, are ranked a little higher than the men. The Field Worker believes that this is justifiable, and that the Huntington men, especially those of lower grade, have wives and sisters of higher quality than themselves. The senior author, perhaps prejudiced by his sex, thinks that the women merely seem superior because of their occupations. A brother, for example, becomes a plumber and has little contact with books, whereas his sister, of no greater ability or better character, becomes a teacher. A farmer's hands grow rough and clumsy, and he hates to write, whereas his wife keeps the accounts and writes to her family. Fortunately this difference in the ranking of men and women has no effect on our final conclusions, although it is interesting in connection with the perennial question of the relative merits of the sexes. The actual numbers assigned to each rank of the Field Worker's estimates, and the number of men for every hundred women are as follows:

RANK	MEN	WOMEN	MEN PER 100 WOMEN
5	68	62	110
4	157	147	107
3	312	253	123
2	182	124	147
1	49	28	175

The Field Worker's estimates, as given in Table 2 below suggest that the coastal sections have a distinct advantage over the rest of the country in the quality of their representatives of Old New England as well as in their power to attract people. The highest rank, an average of 3.34, is held by the East Coast Industrial Section. Table 2 indicates that this region between the seacoast and a line drawn from Portland, Maine, through Springfield and Scranton to Washington not only produces high grade people, but so far as our sample family is concerned, gets almost the same kind when it exchanges with the rest of the country. Nevertheless, the persons who have migrated to other sections (column E) appear to be of a trifle higher type than those who stay at home. This is not so true of the Pacific Coast which stands next with a rank of 3.25. The people born there rank a little lower (3.16) than do those who come from elsewhere (3.33). The persons who come here from elsewhere (column C) average exactly the same as those who come to the east coast.

At the other extreme from these two favored coastal sections stand the two mountainous parts of the country. The people who were born in the Rocky Mountains and still live there average only 2.29. This is a little lower than skilled laborers or farmers, but well above unskilled laborers. These people of the Rocky Mountains stand below the level of their namesakes in the country as a whole whose education stopped with the grammar school. Nevertheless, those who have migrated away from the Rocky Mountain States stand at 3.14, well above the general average of all Huntingtons (3.04) which happens to be almost the same as the average for high school graduates who did not go to college (3.00). The 22 persons who have come into the Rocky Mountain section from elsewhere make a still better showing (3.27).

In the northern Appalachian section the situation is like that of the Rocky Mountain States except that all the averages are a little higher. This advantage would probably disappear if we omitted the industrial strip from Albany along the Mohawk Valley to Rochester, Buffalo, and

Pittsburgh. There is evidently a large and important difference between the social levels of the people of Puritan descent in the northeastern United States within and without the industrial area. This is only what would be expected, for in one case half the men follow professions or are business executives, and in the other almost half are skilled laborers. The innate capacity of the skilled laborers may perhaps be as great as that of the other group, and their lower rank may be due entirely to lack of opportunity. It seems to us more probable that there is a real difference biologically as well as culturally. In that case the higher rank of the people in the industrial area means that on an average they possess greater innate ability than those of the rural districts, and that this has helped to give them greater opportunities. It must not be inferred, however, that the facts here given furnish a clue to the status of any given individual. Each section contains persons of very high and of very low rank. The difference between the geographical sections lies in the proportions of the two kinds.

The North Central States with a Field Worker's average of 3.00 in Table 2 and the South with an average of 2.94 are intermediate between the fortunate coasts and the less fortunate mountainous sections. So far as may be judged from our Puritan sample, the North Central States come very close to the general average for the whole country (3.04). This is especially true of the people who were born here. Their average is almost identical with the general average of all the Huntingtons in the country. This geographical section, however, is like others in sending out people whose average (3.30) is considerably above the normal, and in receiving people of the same caliber from elsewhere. The South, on the other hand, is peculiar in that the Huntingtons who were born here rank higher than those born anywhere except in the East Coast Industrial section. Unfortunately, however, many of the ablest of these—35 of them, averaging 3.63—have gone elsewhere. On the other hand, the 47 who have come from other sections, although including many able people, average only 2.85, which is much the lowest among the migrant groups aside from those who have come from foreign countries. This suggests that although the South must have gained greatly at one time by the migration from the North which brought people who produced offspring averaging 3.33, it is now suffering rapid loss.

Still further light on the effect of migration upon the quality of the people in the various parts of the country is afforded by Table 3, where suburbs are placed last because they represent the final growth of large cities.

Several facts stand out clearly in this table. The first, which of course

TABLE 2

*Field worker's estimates**

	A (B+C)	B	C	D (B+E)	E
	ALL PERSONS LIVING HERE	PERSONS BORN HERE AND LIVING HERE	PERSONS BORN ELSE-WHERE AND LIVING HERE	ALL PERSONS BORN HERE	PERSONS BORN HERE AND LIVING ELSE-WHERE
I. East Coast Industrial Section..	3.34	3.34	3.33	3.36	3.42
II. Pacific Coast.....	3.25	3.15	3.33	3.16	—
III. North Central States.....	3.00	2.90	3.28	3.04	3.33
IV. The South.....	2.94	3.11	2.85	3.33	3.63
V. North Appalachian Region....	2.69	2.60	3.32	2.84	3.29
VI. Rocky Mountain States.....	2.63	2.29	(3.27)	2.51	(3.14)
VII. Canada (13 men, 4 women)....					(2.82)
VIII. Great Britain (20 men, 12 women)					2.56
IX. Other Foreign (17 women).....					(2.88)

The number of persons and the probable errors of this table are as follows:

	A		B		C		D		E	
	CASES	PROBABLE ERROR	CASES	PROBABLE ERROR	CASES	PROBABLE ERROR	CASES	PROBABLE ERROR	CASES	PROBABLE ERROR
I. East Coast.....	407	.04	255	.05	152	.06	308	.05	53	.09
II. Pacific Coast.....	230	.05	90	.06	140	.06	92	.06	2	—
III. North Central.....	406	.03	334	.04	72	.07	494	.03	160	.05
IV. South.....	92	.06	45	.09	47	.09	80	.08	35	.15
V. North Appalachian.....	288	.05	254	.04	34	.15	390	.04	136	.06
VI. Rocky Mountain.....	64	.09	42	.09	22	.07	57	.11	15	.22
VII. Canada.....									17	.16
VIII. Great Britain.....									32	.12
IX. Other Foreign.....									17	.17

*Averages based on less than 30 persons are enclosed in parentheses.

is well known, is that the social level, as measured in the ordinary way or by our Field Worker's estimates, rises almost steadily from the rural communities through the villages, small towns and small cities to the great cities and their suburbs where it is highest (column D). In the first column of the table the Field Worker's estimates rise with almost perfect regularity from 2.47 among the rural people who still live in the locality where

TABLE 3

*The effect of migration as shown by field worker's estimates**

	A	B	C	D	E	F
	SAME LOCALITY	SAME OR ADJACENT STATE OUTSIDE OF HOME COUNTY	NON-ADJACENT STATE	ALL, REGARDLESS OF PRESENT RESIDENCE	PER CENT MOVING AWAY FROM LOCALITY OF BIRTH	PER CENT MOVING TO NON-ADJACENT STATE
Rural	2.47 (145)	2.73 (223)	3.37 (78)	2.75 (446)	67.5	17.5
1,000–2,500†	2.42 (36)	3.04 (93)	3.32 (50)	3.00 (179)	79.8	27.9
2,500–10,000†	2.84 (49)	2.73 (74)	3.28 (65)	2.94 (188)	73.9	34.5
10,000–100,000	3.10 (71)	3.18 (71)	3.41 (78)	3.23 (220)	67.7	35.6
Over 100,000	3.32 (136)	3.64 (79)	3.62 (89)	3.49 (304)	55.2	29.2
Suburban	3.88 (25)	3.93 (14)	3.60 (5)	3.87 (44)	43.2	11.4

* Figures in parenthesis here and in other tables show the number of persons or cases on which the accompanying data are based.

† When these two are combined, the Field Worker's estimates in columns A, B, and C become 2.66, 2.93, and 3.30. This causes the estimates as a whole to increase with almost perfect regularity when read either from left to right or from the top downward. The exception to this in the case of suburbanites who have migrated to non-adjacent states has no significance because of the small number of cases.

they were born, to 3.88 among the similar suburban people. In the next column the people who were born in rural communities and have moved out of the county of their birth into some other part of their own or an adjacent state average 2.73 against 3.93 for similar suburban people. On the other hand column C shows that those who migrate as far as non-adjacent states differ little in quality, no matter what sort of communities

they are born in. Column E illustrates the more or less familiar fact that the tendency to migrate diminishes as one goes from places with small opportunities to those of the opposite type. More than two-thirds of the people born in rural localities move at least as far as some other county. A still larger proportion—four-fifths—of those born in little towns of 1,000 to 2,500 where there are few openings for work move away. In the larger places the number moving away decreases steadily until it amounts to only a little more than half in the greatest cities. In the suburbs of such cities the percentage drops still farther, to 43. The reasons for all this are discussed in Chapter VIII.

The last column of Table 3 shows that the tendency to migrate far away is partially inhibited at both ends of the scale of communities. Only one-sixth of those born in rural communities and one-ninth of those born in suburban districts go to non-adjacent states, whereas more than a third of those born in the small cities do so. This appears to mean that poverty, and lack of training and experience limit the migration of the people from rural districts and villages, while the presence of abundant opportunities near at hand limits that of the people born in the suburbs.

Appendix B

OCCUPATIONS AND ECONOMICS

One of the most easily available measures of social and economic status is occupations. In our sample of old New England stock the occupational status is very different from that of the country as a whole. This is shown

TABLE 4

Occupations of the Huntingtons

	PERCENTAGE IN UNITED STATES		PERCENTAGE AMONG HUNTINGTONS		NUMBER OF HUNTINGTONS FOR EVERY INDIVIDUAL EXPECTED ON THE BASIS OF THE CENSUS	
	Men	Women	Men	Women	Men	Women
	A	B	C	D	E	F
Professions of all kinds	4.2	13.9	17.3	45.3	4.1	3.3
Business executives, owners, managers, etc	8.9	5.5	19.8	5.9	2.2	1.1
Clerical pursuits, salesmen, etc	11.9	25.0	17.1	36.8	1.4	1.5
Skilled laborers, artisans, mechanics, etc	24.0	3.9	23.8	5.3	1.0	1.4
Farmers	25.1	8.5	11.6	0.0	0.5	0.0
Unskilled laborers	23.6	36.6	10.5	6.6	0.4	0.1

in the data in Table 4 as to the percentage of gainfully occupied men and women in the main types of occupations. The data here shown include persons known from both directories and questionnaires.

The most significant part of this table is the last two columns showing how many Huntingtons there are compared with what would be expected if they were employed in the same ways as the entire population. These

columns show that there are 4.1 professional men and 3.3 women for every one that would be expected if people of New England descent entered the professions in the same proportions as the rest of the population. This is what we should expect from our study of names in earlier chapters. Another notable fact is the steady way in which the figures for the men decline in column E as one goes from the more intellectual to the purely physical occupations. The contrast between 4.1 for professions and only 0.4 for unskilled laborers means that members of the old New England stock, or

TABLE 5

Index numbers showing number of Huntington men in various occupations for each man that would be expected on the basis of occupations in the United States as a whole

	NORTHERN NEW ENGLAND	SOUTHERN NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	NORTH CENTRAL	SOUTH CENTRAL	ROCKY MOUNTAIN	PACIFIC	ALL SECTIONS	PERCENTAGE FOR ENTIRE UNITED STATES
Number of men.....	46	131	192	54	289	37	47	165	961	
Professions.....	3.6	5.0	4.8	4.5	2.4	6.4	7.6	4.3	4.1	4.2
Upper business.....	1.7	1.2	3.4	2.7	2.2	1.8	0.7	2.1	2.2	8.9
Clerical.....	0.6	1.3	1.3	1.1	2.0	1.3	0.0	1.4	1.4	11.9
Skilled labor.....	1.9	1.3	0.7	1.3	1.0	0.8	0.4	1.0	1.0	24.0
Farmers.....	0.4	0.3	0.3	0.1	0.6	0.8	1.6	0.4	0.5	25.1
Unskilled labor.....	0.3	0.5	0.4	0.6	0.4	0.1	0.6	0.6	0.4	23.6

at least persons of the general type here represented, are four times as likely to become professional men as is the average American, and less than half as likely to be unskilled workers.

Table 5 shows these relationships for the geographical sections of the United States. The numbers in the main part of the table, omitting the top line and the right hand column, show how many Huntingtons there are in each occupation for every one that would be expected on the basis of all the men in the United States. The first column, for example, shows that in Northern New England our old Puritan stock is relatively strongest

in the professions and skilled labor, and weakest in unskilled labor and farming. In the line labelled "Professions" we see that in every part of the country the Huntingtons have at least twice as high a percentage of professional men as has the entire population. The Rocky Mountain States actually have 7.6 times as many. This is not of much significance, however, since we have records of only 47 occupied Huntington men in those states. The mere presence of a few engineers, attracted in part by the mines, greatly raises the percentage. The north Central States resemble the United States as a whole more than does any other section, as appears from the fact that the numbers in their column range only from 0.4 to 2.4. Even this, however, is a very marked contrast. The professions show the greatest regularity from one section to another, their highest ratio in the table being only three times their lowest. This means that in the old New England type the professional men are the most uniformly distributed over the country. The clerical group would come next if it were not for the absence of any persons of this type among those for whom we have data in the Rocky Mountain States. The most fundamental feature of the table is the strong and consistent contrast between the professional line at the top and the lines for farmers and unskilled laborers at the bottom. In every section of the country the index numbers for the professional men are at least six times as great as for unskilled workers, and four times as great as for farmers.

Since the professions are so predominant let us see how much they differ among themselves. This appears in Table 6 showing a further set of index numbers like those in Table 5. The preponderance of professors, authors, and doctors gives some indication as to the character of this old New England stock. Among the engineers, who come next, we have already seen that there is some doubt as to how many are fully trained. Perhaps their index number should be discounted a little, but similar uncertainty probably exists in the census. Moreover a good many persons belong to each profession only by courtesy, being perhaps clerks, farmers, or skilled laborers who dabble in the law, preach occasionally, sing a little in public, or do a little surveying, and therefore like to call themselves professional. The most noteworthy fact about the men in the professions, however, is the relative abundance of college professors and authors. Men of this kind are generally supposed to influence public opinion more than any others. They are eight times as numerous in this group as in the population as a whole. All this has much significance when we inquire how far these people of old New England ancestry form a well balanced community.

The relative rank of the various occupations according to the Field Worker's estimate is worth noting at this point. How much it means may

TABLE 6

The tendency toward the professions

	NUMBER OF HUNTINGTON MEN FOR EACH MAN THAT WOULD BE EXPECTED ON THE BASIS OF THE ENTIRE UNITED STATES
College professors	8.5
Authors and editors	7.7
Doctors and dentists	6.8
Engineers, chemists, etc	4.8
Lawyers	4.3
Clergymen, Y. M. C. A., etc	4.1
Artists, musicians, actors, etc	2.8
Teachers not in colleges	2.1

TABLE 7

Field worker's estimates of occupational and educational groups

Professions	4.05
Business executives	3.44
Clerical	2.96
Farmers	2.85
Skilled laborers	2.46
Unskilled laborers	1.48
College graduates	4.22
High school graduates	3.00
Grammar school graduates	2.42
Not finishing grammar school	1.93

be judged from the accompanying estimates (Table 7) of people with varying degrees of education.

Many features of the economic situation of the group that we are dis-

cussing are already apparent from our study of occupations, but more definite data are afforded by homes, telephones, and automobiles. It is generally supposed that farmers are much more likely to own their homes than are town or city people. Therefore we will separate the Huntington farmers from the rest of the population. This gives the results shown in Table 8.

The first line means that in New England as a whole 35 per cent of the adult men who do not live on farms own the houses in which they live. The corresponding percentage among the 117 similar Huntington men for

TABLE 8

Owned homes per 100 adult men in geographical sections

Non-farm population

	GENERAL POPULATION	HUNTINGTONS	HOME OWNERSHIP RATIO OF HUNTINGTONS IN PROPORTION TO THAT OF POPULATION AS A WHOLE
	A	B	C
New England	35	55 (117)	1.6
Middle Atlantic States	33	54 (136)	1.6
North Central States	40	59 (125)	1.5
Southern States	35	53 (51)	1.5
Rocky Mountain States	35	64 (47)	1.8
Pacific States	38	58 (93)	1.5
All	38	56 (569)	1.5

whom we have reports is 55, or 1.6 times as much. This is a very large proportion when one remembers that the men with whom we are dealing include not only the heads of families but unmarried sons and brothers who live in houses owned by other members of the family. It means that two-thirds or possibly three-fourths of these people live in houses belonging to their own families. In the rest of the country the percentage living in their own houses is approximately the same or else a little larger, ranging up to 64 in the Rocky Mountain States. The comparative uniformity of the figures in all sections is notable, but this is equally true of the entire

population. The most important fact for our present purposes is that for our sample family as a whole the percentage of the non-farm population who own their homes is 1.5 times as great as for people in general.

Among farmers a similar situation prevails. The percentage of men on the farms who live in their own houses is 42 for the population as a whole and 56 among the Huntingtons. It will surprise many people to find that in our sample family the people who live on the farms are no more likely to own their homes than are the rest of the population. Neither these figures nor those for the population as a whole support the general idea that farmers own their homes. As a matter of fact only 57 per cent of all the farms of white men and 22 per cent of those of colored men are owned

TABLE 9

Owned homes per 100 adult men in different occupations

BY OCCUPATION		BY FIELD WORKER'S ESTIMATE	
Unknown	89 (44)	5 (highest)	55 (62)
Professions	71 (115)	4	70 (125)
Upper business	69 (133)	3	62 (254)
Farmers	56 (102)	2	45 (184)
Skilled labor	46 (151)	1 (lowest)	29 (45)
Clerical	31 (84)		
Unskilled labor	29 (42)		
All	56 (670)		

by the men who run them. Of course there is more than one man per farm on an average, so that this agrees with our figure of 42 men per hundred living in their own houses on the farms. For our purposes the significant fact is that the old New England stock, whose farmers live mainly in the Central and western states, are about one-third more likely to own their farms than are American farmers as a whole.

A comparison between the home ownership of farmers and other occupational groups is interesting. Table 9 shows that the professional and business men of our sample family are more likely to own their homes than are the farmers. Their home ownership is swelled by the fact that a number of homes are owned by widows and by unmarried professional women. These have to be included to make our data comparable with

those of the census. If they are omitted, the percentage of home ownership falls to 60 for the professional men as compared with 68 for the business men. The professional men are less likely to own their homes than are the business men because clergymen, engineers, teachers, and certain other professional men tend to move from place to place, especially before they reach middle age. Skilled laborers and especially clerical people and unskilled laborers are considerably less likely to own homes than are the professional people, business men, and farmers. Nevertheless, the skilled laborers, with 46 home owners per hundred men, stand at a higher level than the entire farm population of the country as a whole (42), and decidedly higher than the average of the non-farm population (38). The homes in the unknown group at the top of the preceding tabulation by professions are owned largely by widows and unmarried elderly women. The fact that so many of these own their homes is a significant indication of the comparatively comfortable circumstances of people of this type.

The difference between the facts of home ownership according to professions and according to the Field Worker's estimates is interesting. In the latter, as so often happens, the highest and the lowest show a certain similarity. Among the lowest, to be sure, only 29 out of every hundred men own homes. In the next to the lowest group, however, this rises to 45, which is well above the average (38) for the non-farm population of the country as a whole. The middle class people, forming numbers 3 and 4 of the Field Worker's estimates show the maximum degree of home ownership. A percentage of 70 for rank 4 is so high that practically all who belong to this social level must come from homes owned by their families, even though some of the young people are away and have not yet procured homes of their own. At the highest level, however, we find a drop to only 55. The most successful people are likely to live in large cities, which militates against home ownership. They are also more likely to move away from their ancestral homes, which has a similar effect. Yet even they are fifty per cent more likely to own homes than are people of the average type for the country as a whole. This high percentage of home ownership among all except a small minority in the lower social strata suggests an economic level distinctly above the average. It indicates that we are dealing with the kind of people who pay taxes, and who finance not only the government, but churches, schools, hospitals, and all sorts of philanthropic activities. Such people have a large stake in the established order, and hence tend to be conservative.

Telephones tell much the same story as homes. Table 10 indicates that in all sections of the United States the members of our sample family who

do not live on farms have relatively more telephones than do people of the same type in general. This is especially conspicuous in the South Central, Mountain, and Middle Atlantic States. The contrast between our sample and the population as a whole is easily seen in the ratios of the last column, which show how many telephones a given number of Huntingtons have for every hundred telephones among a similar number of people in the population as a whole. Part of the apparent inferiority of the South in the matter of telephones among the non-farm population as a whole (column A)

TABLE 10

Telephones per 100 adult men in geographical sections

	NON-FARM POPULATION	HUNTINGTON NON-FARM GROUP		HUNTINGTON RATIO WHEN THAT OF GENERAL POPULATION IS RECKONED AS 100
	A	B	C	D
New England	64	79	(108 reports)	123
Middle Atlantic	57	88	(137 reports)	154
North Central	62	81	(148 reports)	131
South Atlantic	43	62	(39 reports)	144
South Central	45	83	(18 reports)	184
Mountain	44	68	(19 reports)	154
Pacific	64	75	(83 reports)	117
All	55	80	(552 reports)	131

Entire farm population, 26. Huntington farm group, 55. Ratio, 212.

is of course due to the presence of Negroes. If the Negroes were omitted, the figures for the two southern sections in column A would be raised a little, and those in column D would become a little lower, but the general relationships would not be altered. The important feature of this table, as of many others, is that it shows a consistent superiority of our sample over the general population no matter what section we deal with, or whether we take the non-farm population or the farmers. The non-farm people of our sample have about 30 per cent more telephones than has the non-farm population in general. The farmers of our sample, with 55 telephones

per hundred men, are about twice as likely to have telephones as are white farmers in general.

Table 11 relating to telephones in comparison with occupations and field worker's estimates shows that practically all the professional and upper business people have telephones of their own. The professional group appears to have more than one telephone per man because many widows and single women have them. The significant thing here is the rapidity with which the numbers drop from 113 in the most intellectual occupations to 28 among the unskilled laborers. The unskilled laborer is only half as likely to have a telephone as the farmer and a quarter as likely as a professional family. Yet even the laborer is as likely to have a telephone as is the average farmer in the country as a whole. The way in which the

TABLE 11

Telephones per hundred adult men in different occupations

BY OCCUPATIONS		BY FIELD WORKER'S ESTIMATE	
Professions	113 (106)	5 (highest)	102 (52)
Upper business	94 (141)	4	109 (119)
Clerical	76 (83)	3	82 (249)
Skilled labor	49 (145)	2	47 (173)
Farmers	55 (92)	1 (lowest)	21 (42)
Unskilled labor	28 (43)		

number of telephones declines downward in both parts of the preceding table suggests that the number of telephones is a fairly good indication of the social level of the various groups.

Our last economic measure is automobiles. Here we find much less contrast than hitherto between our sample family and the population as a whole. Except in the Pacific and South Atlantic States the Huntingtons who do not live on farms do indeed have more automobiles than the similar general population, but the difference is not great. (See Table 12.) For the country as a whole it amounts to only 71 cars per hundred men against 63, or about 13 per cent more. In the Pacific States, for some unknown reason the Huntingtons fall a good deal behind the general population, although standing higher than the general population elsewhere. Perhaps this means merely that the majority of the Huntingtons live in Oregon and Washington and are just ordinary city people like those of the East, whereas

the number of automobiles in the Pacific States as a whole is greatly raised by people who have acquired a competence elsewhere and have come to California because of the climate.

TABLE 12

Adult men per 100 automobiles (passenger cars) in geographical sections

	NON-FARM POPULATION	HUNTINGTON NON-FARM GROUP (AND NUMBER OF PERSONS ON WHICH RATIOS ARE BASED)
New England	56	61 (108)
Middle Atlantic	51	71 (137)
North Central	68	78 (148)
South Atlantic	62	62 (39)
South Central	60	94 (18)
Mountain	70	74 (19)
Pacific	87	73 (82)
All	63	71 (552)

TABLE 13

Adult men per 100 automobiles in different occupations and at different social levels

BY OCCUPATIONS		BY WORKER'S ESTIMATE	
Professions	99	5	108
Upper business	84	4	105
Clerical	59	3	70
Skilled labor	60	2	56
Farmers	78	1	36
Unskilled labor	28		

Turning now to occupations, Table 13 shows about what would be expected. The professional people have the most cars (99 per hundred men). The number here, however, is considerably swelled by cars owned inde-

pendently by women. The unskilled laborers drop very low (28), while the farmers (78) almost equal the business men (84). The farmers have just about as many cars as do farmers in general in states like Ohio (79) and Iowa (86), although more than in Maine (63), or Kentucky (30). It is worthy of note that the farmers in states like Iowa have more cars in proportion to their numbers than do business men among our old New England stock. The reason, of course, is that an automobile is now an essential part of the equipment of an up-to-date farmer. A business man in a large city, on the contrary, especially if he lives in an apartment far down town, may prefer to hire taxis and not be bothered with a car even if he can well afford it. This suggests that in a country like the United States, which is almost saturated with automobiles, their *geographical distribution* is not a very good economic criterion. Other things being equal, the more urban a population becomes, the lower the percentage of automobiles. This is interesting in comparison with less advanced countries like Spain where the contrary is true. There the relatively few automobiles are owned almost entirely in the cities.

Appendix C

EDUCATION AND RELIGION

The importance of education and church membership as indices of social level is universally recognized. The high prevalence of both in our sample New England family is noteworthy. About a quarter of the 607 men for whom we have records are college graduates (column B in Table 14), and a good many others are still students. Their wives are only about half as likely to have a college education (column D), but the difference here seems to be less than in the population as a whole. The unmarried women (column F), on the contrary, appear at first sight to surpass the men in college attendance, but this is largely if not entirely because so many of them are young, and college attendance is constantly becoming more common. Both groups of women, married and unmarried, surpass the men in their tendency to finish the high school. A correspondingly small number have merely a grammar school education or less.

The true significance of the percentages in Table 14 can be realized only when we know their degree of reliability. Would the percentages for college and high school be lower and the others higher if we had full data for the Huntingtons listed in directories, or known only from county officials, as well as for those filling out questionnaires? This is partly answered by means of Table 15 which differs from similar data given in a previous chapter because it includes farmers and women. In using these data we assume that the people known only from directories are of substantially the same caliber as those known only from county officers, except that they are mainly urban while the others are more likely to be rural.

Among the men the percentage of professional people is lower among the two-thirds known from questionnaires than in the one-third known from directories. Hence college graduates are probably not so numerous as the percentages in the first table of this chapter would indicate. A high school education is necessary for practically all persons who fall in any one of the three white collar occupational groups, which form the first three lines of the present table. When these groups are combined, the percentages belonging to them among the men known from questionnaires (54.6 according

to column A) and from directories (52.9, column B) are almost alike, and are practically identical with the percentage of high school and college

TABLE 14

Education of Huntingtons

	MEN		MARRIED WOMEN		UNMARRIED WOMEN	
	Number	Percentage	Number	Percentage	Number	Percentage
	A	B	C	D	E	F
College graduates	150	24.7	39	13.3	38	27.9
High School, Business College, or Normal School, but not College	180	29.7	125	42.8	74	54.4
Grammar School only	206	33.9	108	37.0	20	14.7
Less than Grammar School	71	11.7	20	6.9	4	3.0
Total	607		292		136	

TABLE 15

Percentages of gainfully employed Huntingtons in various occupations according to questionnaires and directories

	MEN KNOWN FROM		WOMEN KNOWN FROM	
	Questionnaires	Directories	Questionnaires	Directories
	A	B	C	D
Professions	18.6	14.3	60.0	17.3
Business executives	22.8	12.5	17.0	13.8
Clerical and salesmen	13.2	26.1	28.0	53.8
Skilled labor	23.2	25.1	4.0	7.7
Farmers	15.6	2.4	0.0	0.0
Unskilled labor	6.7	19.5	1.0	17.3

graduates (54.4). This makes it probable that although we should reduce both the college and the high school percentages, the reduction should not

be large. On the other hand, in the directory group, laborers are much more numerous and farmers much fewer than in the other. The laborer is more of a town man than the farmer, and therefore more likely to go to school. Hence, although laborers as a whole stand below farmers, the inclusion of the directory group would probably lead to only a slight increase in the percentages of men with merely a grammar school education or less. Estimates of the probable percentages of all grades of education among the adult Huntington men are given in column E of Table 21 below.

It is not so easy to estimate the women, since the number with occupations other than home-making is small. Nevertheless, here, as with the men, it seems justifiable to reduce the college and high school figures below the joint percentages of the married and unmarried women and correspondingly raise the percentages of the two lower grades of education. The rough estimates to which this leads are given in column I in Table 16.

Before speaking further of these estimates let us see what is known as to the proportion of persons with different types of education in the country as a whole. The Biennial Survey of Education for 1927–28 published by the United States Office of Education gives some tables (pp. 430 and 698) from which it is possible, with the help of the Census and of later college data, to make a fairly good estimate of the number of college graduates of both sexes in the country in 1932. The resulting figure is 1.7 per cent of the adults beyond college age. This is probably within 0.1 of the truth. Similar estimates for high school and grammar school graduates are not available, but in column A below we have added some very rough estimates based on pages 431–434 of the same Biennial Survey. Those pages give data as to the percentages of boys and girls of various ages who reached certain levels of education in 1918 and 1928 as appears in columns B and C. Of course these percentages have increased with great rapidity during the present century, and the percentage of young people who now finish high school and especially college is several times as large as formerly. Nevertheless the figures in columns B and C in Table 16 help to give some idea of the actual state of affairs.

The parts of Table 16 that bear most heavily on our present problem are columns A and E. From these it appears that during the last generation or two the people named Huntington, and presumably other persons who are mainly of old New England stock, have been about 11 times as likely to go to college as have the average people of the country as a whole. They have been four or five times as likely to finish the high school. This is evident when we add the percentages for colleges and high schools, for the college graduates must all have had the equivalent of a high school

education. On the other hand, the people who fail to complete the grammar school are relatively speaking only about a quarter as numerous among those bearing these old names as in the general population.

TABLE 16

Percentages of persons attaining various degrees of education

	ENTIRE UNITED STATES			HUNTINGTON ADULTS					
	All adults	Persons finishing education in		Both sexes		Men		Women	
		1918	1928	Recorded	Estimated	Recorded	Estimated	Recorded	Estimated
	A	B	C	D	E	F	G	H	I
College	1.7	2.3*	5.0*	21.9	19.0	24.7	22.0	17.9	16.0
High School, etc., but not College	10.3(?)	11.6*	21.0*	36.6	34.5	29.7	27.0	46.6	42.0
Grammar School only	38.0(?)	49.5*	55.8*	32.3	34.0	33.9	35.0	47.8	33.0
Less than Grammar School	50.0(?)	36.6*	23.2*	9.0	12.5	11.7	16.0	5.6	9.0

* The two columns headed 1918 and 1928 are not based on all adults, as are the other columns. They show what percentages of the children who entered the fifth grade ultimately graduated from college or high school in the specified years. The percentages for "Grammar School only" indicate children who entered the eighth grade, even though they did not finish it. Those for "Less than Grammar School" mean children who got as far as the fifth grade but did not reach the eighth. If the children who never reach the fifth grade because of mental or physical deficiency, or some other cause were included, the percentages for those with less than a grammar school education would be slightly increased, and the other percentages correspondingly decreased.

Religion was so important among the old Puritans that its status among their descendants is of especial interest. When the available data are arranged geographically they show surprising differences. (See Table 17.)

The general quality of the Huntingtons who are church members seems

to be higher than that of those who are not members or who make no report as to church relationships. Table 18 gives the figures which indicate this.

TABLE 17

Church membership

	NUMBER OF MEN REPORTING CHURCH RELATIONSHIP	PERCENTAGE REPORTING CHURCH MEMBERSHIP
Rocky Mountain States	31	81
Middle Atlantic States	115	76
South Atlantic States	31	71
North Central States	168	64
South Central States	25	64
Southern New England	83	59
Pacific States	89	47
Northern New England	32	28
Entire Country	609	63.5

TABLE 18

Worker's estimates of church members and non-church members

	FIELD WORKER'S ESTIMATE			NUMBER OF PERSONS		
	Men	Wives	Unmarried women	Men	Wives	Unmarried women
Church members	3.12	3.19	3.47	367	250	114
Not church members	2.78	2.81	3.62	210	80	21
Church relationship unknown	2.76	2.86	3.25	92	226	20

The thoughtful student may surmise that these estimates for church members are high because such membership was counted as a favorable sign by the Field Worker. Such is probably the case to only a very slight

degree. This is evident from the fact that in a purely objective classification, such as that by occupations, professional people show the highest percentage of church membership, as well as the highest worker's estimates. Table 19 shows that church membership is highly prevalent among the professional part of our sample at one extreme, and weakly developed among the laboring part at the other.

As a general rule men are less likely to be church members than are their wives. In the table above this is true of every occupational group. The difference is greatest among business people, and least in the professional group. Among the business people the men stand low, but the wives are more likely to be church members than are those of any other occupational

TABLE 19

Church membership by professions

	PERCENTAGE OF CHURCH MEMBERS		NUMBER REPORTING	
	Men	Wives	Men	Wives
Professions	79	84	106	74
Clerical	66	76	78	33
Farmers	64	77	84	44
Upper business	60	79	137	82
Skilled labor	57	66	131	76
Unskilled labor	56	67	41	21

group except the professional one. The correlation between church membership and intellectual and social position becomes very clear when we classify the Huntingtons according to the Field Worker's estimates. Table 20 suggests that the men of the upper classes support the churches far more than do those of the lower classes.

The descendants of the Puritans appear to have changed their denominational affiliations very freely. Only 12 per cent of the Huntingtons for whom we have reports belong to the Congregational or Unitarian churches, which are the lineal descendants of the church to which a large part of the original Puritans adhered. Half as many report themselves as Roman Catholics or Mormons. At least two who claim this old New England name are Jews, but they have taken the name in place of a foreign appellation. In Table 21 it will be seen that Methodists and Episcopalians are the most

TABLE 20

Church membership and field worker's estimates

FIELD WORKER'S ESTIMATE	PERCENTAGE OF CHURCH MEMBERS				NUMBER OF PERSONS REPORTING		
	Men	Wives	Unmarried women	Difference between husbands and wives	Men	Wives	Unmarried women
	A	B	C	D	E	F	G
5	80	86	59	6	49	35	17
4	71	89	79	18	113	69	56
3	64	71	77	7	235	138	66
2	56	69	55	13	144	67	14
1	49	70		21	35	20	2

TABLE 21

Denominational affiliations and worker's estimate of Huntingtons

DENOMINATION	NUMBER OF ADHERENTS REPORTED				AVERAGE FIELD WORKER'S ESTIMATE
	Men	Wives	Unmarried women	Total	
	A	B	C	D	E
Episcopalians	78	53	31	162	3.69
Congregationalists	51	29	22	102	3.63
Presbyterians	54	34	22	110	3.58
Christian Science, Christian, Friend, Swedenborgian, Unitarian, Universalist	29	21	5	55	3.26
"None," Agnostic, Atheist	32	6	6	44	3.12
Baptist	76	35	6	117	2.91
Methodist	90	51	21	162	2.82
United Brethren, Lutheran, Disciples, Reformed, Seventh Day Adventists, Hope Reform, Nazarene, Evangelical, Pentecostal	34	21	4	59	2.65
Roman Catholic	9	21	5	35	2.28
Mormon	10	8	2	20	2.05

numerous; then come Baptists, Presbyterians, and Congregationalists. These five denominations comprise 85 per cent of the total.

The differences in social standing revealed by the Worker's estimates in column E of this table are very significant. The Episcopalians, Congregationalists, and Presbyterians stand at the top, and are practically on a par. The other more liberal denominations, taken together, and the people who have rejected religion come next. Then follow the great popular Baptist and Methodist denominations which hold the same central position in religion that names like Brown and Williams hold when classified according to the method of earlier chapters. After them come the conservative

TABLE 22

Percentages of men of various denominations in occupational groups

	PROFESSIONS	UPPER BUSINESS	CLERICAL	SKILLED LABOR	FARMERS	UNSKILLED LABOR
Episcopalians	28	35	19	12	3	4
Congregationalists	33	16	18	22	10	2
Presbyterians	28	31	13	11	7	9
Other liberal churches	10	24	17	28	14	7
No church	31	25	6	16	19	3
Baptist	13	28	16	26	10	7
Methodist	15	18	15	32	14	6
Fundamentalist churches	15	9	15	20	29	12

fundamentalist denominations, and then the Roman Catholics and Mormons. This order agrees closely with what was found by Huntington and Whitney in a study of WHO'S WHO which was published in *The Builders of America*. The same order has since been found by several people in studying men of science and other groups of leaders. Such agreements with other investigations—and they are numerous—are important because they add weight to the lines where the relatively scanty data of this book lead to conclusions not previously realized.

The last thing to note about religion is that there is some correlation between occupations and denominations as shown in Table 22. Professional people tend toward the Congregational church, and are found in large pro-

portions among the agnostics and others who give up the church altogether. A third of the Huntington men in each of these groups are professional. The Episcopalians and Presbyterians have especially high percentages of business as well as professional men. The Baptists attract business men and skilled laborers; the Methodists are especially strong in skilled laborers, and the conservative sects like Lutherans and Disciples in farmers and laborers. The selective power of churches is very great because it is so easy to change from one denomination to another, especially when moving to a new town, or upon getting interested in a new girl. We believe that the selection is biological as well as social, for the two seem almost inseparable. The churches must have a good deal of effect in promoting marriages between people of the same kind, and thus in dividing the population into distinct social levels. This is obviously true socially. The different types of faces seen in different churches agree with other evidence in suggesting that it is also true biologically.

Appendix D

RACIAL TRAITS AND MARRIAGE

Although the investigation described in this book could not pay much attention to the biological characteristics of the descendants of early New Englanders, a few interesting facts were brought to light. One was a slight difference in character between blue-eyed and brown-eyed people. Another was a curious change in the percentage of blue-eyed people from

TABLE 23

Eye color and migration

RELATION OF PLACE OF RESIDENCE TO PLACE OF BIRTH	A NUMBER OF PERSONS	B PERCENTAGE WITH BLUE EYES	C PERCENTAGE WITH BLUE PLUS HALF OF GRAY EYES	D PERCENTAGE WITH BLUE PLUS HALF OF GRAY OR HAZEL EYES
Same county	341	48.6	55.3	59.6
Elsewhere in same or adjacent state	477	48.9	55.6	60.1
More distant state	270	51.0	59.0	64.5
Difference between first and last figures		2.4	3.7	4.9

one age-group to another. In our questionnaire each person was asked to state the color of his eyes. The replies appear to show significant differences according to migration, occupations, and age, but not according to geographical location. The facts as to migration are shown in Table 23 which gives the percentage of all Huntington adults, including wives, who have eyes of the respective colors and live at varying distances from their places of birth.

In column C gray eyes are assumed to be half as important as blue eyes in indicating blondness. The last column is an attempt to show the full

measure of blondness by assuming that both gray and hazel eyes mean a mixed ancestry in which gray eyes are added to the blue. Although the differences shown by these figures are not great in any one column, they appear to be significant. In each case (columns B, C, and D) those who migrate a little way from home, but stay in the same or an adjacent state have practically the same percentage of blondness as those who stay in the county of their birth. Those who migrate to more distant states, however, have a greater percentage. Moreover, as we come nearer to a full measurement of blondness by adding half the gray eyes, and then half the hazel, the contrast between the stay-at-homes and the wanderers becomes greater, as appears in the lowest line of figures. This suggests a germ of

TABLE 24

Eye color and occupation

OCCUPATION	NUMBER OF MEN	PERCENTAGES HAVING BLUE EYES	PERCENTAGES HAVING BLUE PLUS HALF OF GRAY EYES	PERCENTAGES HAVING BLUE PLUS HALF OF GRAY OR HAZEL EYES
Business executives	118	58.5	66.1	68.6
Farmers	87	55.2	64.4	66.7
Professional men	101	56.4	59.8	62.4
Skilled laborers	135	43.7	51.1	55.1
Clerks and salesmen	75	41.3	48.7	51.4
Unskilled laborers	43	34.8	44.2	44.2

truth in the idea that blond people of the Nordic type have a little more tendency to migrate than do those of either the gray-eyed Alpine or the brown-eyed Mediterranean type. The tendency is very slight, however, at least in this group of descendants of the early New Englanders.

The relation of eye color to occupation is quite clear and the differences between occupations are too pronounced to be doubtful. Using only the adult men and placing the occupations in the order of their percentage of blue eyes plus half the gray and hazel eyes, we get the results in Table 24.

The table speaks for itself. So far as blue eyes are concerned the business executives, farmers, and professional men are almost on a par; the skilled laborers, clerks and salesmen come in a second group; and the unskilled laborers come last. When the gray and hazel eyes are added, the business

executives and farmers stand close together with the greatest blondness; the professional men occupy a second level; the skilled laborers and the clerical group a third; and the unskilled laborers stand still lower. The degree of ability required for the various occupations may have something to do with this, but isolation is certainly another important factor. The farmers have had less chance than any other occupational group to intermarry with people unlike themselves, and this has probably helped to keep them blue-eyed like the people of the part of England whence most of their ancestors were derived. Wealth, too, may have helped in causing blondness to run in the families of the business executives, provided it be true that wealth helps a young man to get the girl of his choice, and that like marries like. The professional men, as we have seen, include a rather mis-

TABLE 25

Eye color and field worker's estimates

COLOR OF EYES	PROFESSIONS	BUSINESS EXECUTIVES	CLERICAL PURSUITS	SKILLED LABORERS	FARMERS	UNSKILLED LABORERS	ALL	NUMBER OF CASES
Blue	4.22	3.28	3.03	2.51	2.55	1.62	3.09	386
Gray or hazel	3.89	3.35	2.81	2.44	2.50	1.50	2.84	175
Brown	3.88	3.65	3.02	2.37	2.31	1.60	2.79	239

cellaneous group, some of whom are farmers or skilled laborers who temporarily act as "musicians," "entertainers," "engineers," and the like, and hence report themselves as such and must be classed as professional. Accordingly, let us take only the 31 clergymen, physicians, teachers, and social workers, that is, the most altruistic and socialized professions. Among these the percentage of blue-eyed persons reaches the high level of 74, and of blue-eyed plus half the gray-eyed 79. No hazel-eyed are reported. How significant this may be we do not know. It would be rash to say that blue eyes indicate altruism or a religious spirit, but people who are most purely of the old Puritan stock biologically may be the most likely to carry on the cultural heritage of those same Puritans.

Our data also show that regardless of occupation there is a slight tendency for blue-eyed people to be more successful than others. Table 25 gives the average Field Worker's estimates for both husbands and wives in the chief groups of occupations.

In three of these occupational groups, namely the professional people, the skilled laborers, and the farmers, there is a regular, although slight rise in the Field Worker's estimate from brown through hazel and gray to blue. This is reversed among the business executives, and is irregular in the other two groups, although in both of these the blue-eyed people stand very slightly in the lead. Only in the final figures, where all occupations are combined, is the number of cases large enough to give convincing results. There the difference between the brown-eyed and blue-eyed people amounts to nearly seven times the probable error. This is almost conclusive evi-

TABLE 26

Changes in eye color

AGE	PERCENTAGE HAVING BLUE EYES IN							ALL PERSONS	PERCENTAGES
	New England	Middle Atlantic	Pacific	Three coastal areas combined		Rest of country			
	A	B	C	Persons	Percentages	Persons	Percentages		
70 or more	52.2	60.0	*	62	51.5	40	67.6	102	57.8
60–69	51.8	51.8	50.0	86	51.2	39	*43.6*	125	56.3
50–59	42.3	42.9	39.4	80	46.4	86	47.7	166	47.0
40–49	*40.0*	*39.5*	*24.0*	98	*35.7*	97	50.6	195	*43.2*
30–39	53.2	69.8	*	82	53.6	82	56.1	164	54.9
20–29	65.1	57.7	62.8	119	64.7	71	50.8	190	59.4

* Less than 20 persons.

dence of a real difference. Nevertheless, the difference between the two kinds of people is slight, and people of every grade of ability and character are found with each kind of eyes.

The last and most puzzling aspect of eye color is in the fact that the percentage of blondness is high among the older people, reaches a minimum among those forty to fifty years of age in 1932, and then increases again. This is true of New England, the Middle Atlantic States, and the Pacific Coast, that is, of the three main urban areas. It is not true of the rest of the country taken as a whole, although it might be found in the Great Lakes industrial area if that were investigated separately. Including wives, as well as husbands, the figures are given in Table 26.

The systematic quality of this minimum in columns A, B, and C, and the fact that it occurs in all three of the urban areas and not in the rest of the country suggest that it is real. If it is real, it is surely significant, but what it means we do not know. It is, of course, well known that young children may have blue eyes which later become brown, but our data include only persons over 20 years of age. It has also been found that blue eyes increase in frequency among old people, probably because of a semi-opaque film which seems to spread over the eyes. Moreover, the older people are more purely of English ancestry than the younger ones, and this would lead to a greater percentage of blue eyes. Then, too, it is possible that the blue-eyed people live a little longer than the others. Taking all these conditions into account it is not hard to see reasons for a decreasing percentage of blue eyes from decade to decade. But all this affords no help in explaining the increasing percentage of blue eyes among the younger people. These younger people are the ones who replied least carefully to our questionnaires; the blue-eyed may possibly be more careful in such matters. Or perhaps since 1890 some unknown cause has not only checked, but strongly reversed the tendency toward increasing brunetteness among the urban Huntingtons. We cannot see any reasonable cause of this. Possibly it is connected with a reversal of the birthrate which we shall mention later, but it seems to come too early for that and to be too pronounced. Perhaps, too, this change in eye color may be connected with the rapid migration of these later times, but here too we come against a blank wall so far as any real explanation is concerned. Here, as in many other cases in this book, a new method of investigation raises an interesting and important question, but the data at hand are not sufficient to lead to any definite conclusion. Putting aside this uncertainty, our data show quite clearly that the blue-eyed people slightly but genuinely exceed the brown-eyed ones in their tendency to do each of the following things: wander, go into altruistic professions, become business executives, remain on the farm, succeed in practically all walks of life.

The next topic to engage our attention is marriage. Our questionnaires indicate that including all whose wives are dead or divorced only 1069 or 67 per cent of the 1601 men over 20 years of age for whom we have records have ever been married. Among native whites of native parentage in the country as a whole the corresponding percentage is approximately 78. This difference of 11 per cent must indicate either that the Huntingtons are less likely to marry than are average Americans of native white parentage, or that in the questionnaires many fail to record their marriages. That the former is mainly the case is indicated by the women. We have records of

362 who are unmarried and bear the name Huntington. We may assume that the proportions of men and women are nearly the same in this family group as in the entire population of native white parentage. If such is the case 77 per cent of the Huntington women over 20 years of age are married (including those widowed or divorced) in contrast to about 85 per cent among all native white women of native parentage. In the case of the women there is practically no uncertainty as to whether they are married or not. Since the women show 8 per cent fewer marriages than corresponding persons of native white parentage in the country as a whole, and the men 11 per cent, we may reasonably conclude that the extra three per cent may be men whose wives have long been dead or divorced, and are therefore not mentioned in the questionnaires. Whatever may be the exact figure as to this, there can be little doubt that people belonging to our sample of old New England stock are somewhat less likely to marry than are the great majority of native white Americans. This, however, is no more than would be expected where the percentage of professional people, business executives, and migrants to cities is so high.

The unmarried men and the unmarried women, most of whom of course are young, show an interesting difference in geographical distribution. This is evident in the data in Table 27 which give the number of unmarried women per hundred unmarried men, and also the number of unmarried men per hundred men who are married.

The relatively uniform percentages in the first column indicate that the unmarried women are distributed over the country in almost the same way as their fathers and married brothers. The unmarried men, on the contrary, as appears in the second column, are distributed in quite a different way. They are scarce in the South Atlantic, Pacific, Southern New England, and Middle Atlantic States. These are just the regions to which there has been the most active migration; three of them are the sections where urban life is most highly developed. In the last column, however, we see that these are sections where unmarried women are numerous compared with unmarried men. On the other hand, there are a great many unmarried men and relatively few unmarried women in the relatively remote and isolated regions of northern New England and the Rocky Mountain States. The great central plains, both north and south, with their thriving agriculture, stand midway between the other two types of regions. It is difficult to follow the meaning of so many figures, but a few more will make the matter clearer. Table 28 shows how many unmarried Huntington men and women there are in communities of various sizes.

In the cities of 10,000 inhabitants or more unmarried men and women

TABLE 27

Geographical distribution of marriage

	UNMARRIED WOMEN PER HUNDRED MARRIED MEN	UNMARRIED MEN PER HUNDRED MARRIED MEN	UNMARRIED WOMEN PER HUNDRED UNMARRIED MEN
	A	B	C
South Atlantic States	35	35	100
Pacific States	37	41	83
Southern New England	39	43	90
Middle Atlantic States with Delaware, Maine, and District of Columbia	35	45	77
West North Central States	40	50	80
East North Central States	31	56	55
South Central States	31	57	55
Northern New England	32	73	44
Rocky Mountain States	35	73	47

TABLE 28

Unmarried people and size of community

INHABITANTS	UNMARRIED MEN	UNMARRIED WOMEN	UNMARRIED WOMEN PER HUNDRED UNMARRIED MEN
Rural	120	35	29
1,000–2,500	52	26	50
2,500–10,000	73	36	49
10,000–100,000	73	73	100
Over 100,000	149	147	99
Suburban	40	24	60
Total	507	341	

are equally numerous. On the farms, however, and in the villages and small towns there are only one-third to one-half as many such women as men. In other words the young women flock to the cities, whereas the

young men show a tendency to stay on the farms. This is clearly evident in the figures in Table 29 showing how many unmarried men and women migrate longer or shorter distances from home.

The girls are much more migratory than the young men. The reason, of course, is largely that they cannot find jobs on the farms and in the villages and smaller towns. Clerks, stenographers, teachers, and women who carry on enterprises of their own find their jobs chiefly in cities. The young men on the contrary find work as farmers, carpenters, painters, garage men and the like near home. In some cases, where there are several children in a family, one brother who is less ambitious, more self sacrificing, or more fond of country life stays behind in the old home and takes care of his parents. He does not marry because the girls whom he might have

TABLE 29

Unmarried persons and migration

RELATION OF RESIDENCE TO BIRTHPLACE	NUMBER OF UNMARRIED MEN	NUMBER OF UNMARRIED WOMEN	WOMEN PER ONE HUNDRED MEN
Same county	70	64	91
Same or adjacent state	48	53	110
More distant state or county	32	42	131
Total	150	159	

married move away to the cities. This is one of the ways in which the country districts are steadily losing their old New England stock. Incidentally the last two tables bring out a noteworthy difference between men and women. In the table showing where the unmarried people live there are 507 men and only 341 women. In the table showing where they were born there are 150 men and 159 women. This means that among the unmarried people whose names we obtained 70 per cent of the men and only 53 per cent of the women failed to return our questionnaires. The unmarried people were far more careless in this respect than were the married, and the unmarried men were worst of all.

The age at which people marry is a significant index of their social condition. Table 30 gives the ages of all the Huntingtons at marriage, arranged according to occupations. The professional men, as might be expected are the oldest, and their wives are the oldest among the women. The

farmers come next, but their wives are approximately the same age as those of business executives and skilled laborers. The skilled laborers and clerks, who attain their full financial ability while still relatively young, marry youngest. The unskilled laborers are so few in number that the data for them have little value. It is worth noting, however, that they agree with the skilled laborers and clerks in marrying women only two or three years younger than themselves.

TABLE 30

Age of Huntingtons at marriage

	MEN		WOMEN		DIFFERENCE IN AGES OF HUSBAND AND WIFE
	Number	Age at marriage	Number	Age at marriage	
Professional	96	28.3	93	24.2	4.1
Farmers	76	27.4	75	22.8	4.6
Business executives	122	26.9	114	22.4	4.5
Unskilled laborers	29	26.0	27	24.0	2.0
Skilled laborers	115	25.8	104	22.8	3.0
Clerical	56	25.0	51	21.9	3.1
All	494	26.7	467	23.0	

A much more significant set of conditions is seen when we classify our people according to the Field Worker's estimate. We then get the interesting result shown in Table 31.

Here is another case where the people at the top and the bottom of the social side behave alike. The most successful men marry late, the men of average success marry rather young, while those that are less successful again marry later. The same tendency is apparent among the women, although not to so great a degree. The relatively greater age of the most successful couples is unfortunate from the standpoint of the size of families and the consequent effect in reducing the number of children from good homes in later generations. The correspondingly great age of the unsuccessful couples, on the contrary, is a good thing if it diminishes the number of their children. Unfortunately, however, a second fact that stands out in the table is that the difference between the ages of husband

and wife increases as we go from the most to the least successful. The wives of even the least successful are younger at marriage than are those of the most successful, and the age of the wife has far more effect upon the number of children than has that of the husband.

TABLE 31

Field worker's estimates and age at marriage

WORKER'S ESTIMATE	MEN		WOMEN		DIFFERENCE IN AGES OF HUSBAND AND WIFE
	Number	Age at marriage	Number	Age at marriage	
5 (highest)	43	29.2	34	25.8	3.4
4	104	27.1	108	23.7	3.4
3	221	26.2	212	22.6	3.6
2	95	26.3	82	22.1	4.2
1 (lowest)	30	29.6	30	24.5	5.1

TABLE 32

Average age at marriage

WORKER'S ESTIMATE	OVER 60 YEARS				40 TO 60 YEARS				CHANGE IN AGE FROM OLDER TO YOUNGER GROUP	
	Men		Women		Men		Women			
	Number	Age	Number	Age	Number	Age	Number	Age	Men	Women
5 and 4	45	28.5	37	24.4	53	27.5	54	25.2	−1.0	+0.8
3	78	27.1	62	22.8	85	26.3	84	23.6	−0.8	+0.8
2 and 1	41	26.6	23	23.2	52	26.6	51	22.9	0.0	−0.3
All.....	164	27.4	122	23.4	190	26.7	189	23.9	−0.7	+0.5

The question of whether the age at marriage is changing is always of interest. In order to test this we have used only the persons over 40 years of age and have omitted all who were married above that age. Thus the groups in Table 32 are absolutely comparable. The numbers in the two right hand columns are what count. They suggest quite clearly that

among the successful classes for whom the Field Worker's estimate is 4 or 5 the age of men at marriage is declining, while that of women is rising. The change in twenty years amounts to an entire year in the case of men and eight tenths of a year in that of women. Thus the difference in the ages of husband and wife has been reduced from 4.1 to 2.3 years. In the middle group of ordinary people with a worker's estimate of 3 a similar change has taken place, reducing the difference in the ages of husband and wife from 4.3 to 2.7 years. Among the less successful, however, there has been no appreciable change. Here again we find a condition which may be bad for future generations. It seems to mean that the women who are most likely to give their children a good inheritance and good training are being married older than formerly, while the women who appear to be of less social value do not show any such tendency.

The subject of marriage leads naturally to that of ancestry. About half of the people named Huntington report some ancestry other than English. Some report ancestors from three or four different countries. We cannot tell just how much this means, for it was impossible to get data as to whether the ancestors reported were near or remote. Such a statement as "Mother German" is perfectly clear, but "Remote Italian ancestor" cannot be evaluated. It seems probable that the average non-English ancestor is at least as remote as a grandparent. In that case we can get a slight idea as to the amount of non-English ancestry. The total number of adult men and their wives who reported concerning their ancestry is 969. Among these there are 762 reports of non-English ancestry. The number of people reporting such ancestry, however, is much smaller, for many report ancestors of more than one nationality. If each such ancestor were as near as a grandfather, he would give the individual who reports him a non-English inheritance amounting to one-quarter. At this rate the 969 persons would be four-fifths English and one-fifth something else. How near this comes to the truth we cannot tell, but probably one-fifth is above the actual fact so far as adults are concerned.

The non-English fraction of the ancestry of the Huntingtons is divided into the following percentages:

Other English-speaking groups	51%
Irish	22
Scotch	21
Scotch Irish	5
Welsh	3

Other Teutonic		32%
German	22	
Dutch	7	
Scandinavian	3	
French		14%
All other		3%

It is possible, but not probable, that those from whom we have no reports have a larger percentage of foreign ancestry. It is also probable that part of the Irish reports should be Scotch-Irish, which means really Scotch. Putting aside these doubtful matters, it appears that among the adult Huntingtons living in 1932, the percentage of intermixture with any racial groups other than those of Great Britain and Ireland does not account for more than a tenth of the inheritance. Two-thirds of that tenth is Teutonic, and the remainder practically all French. Mixture with the non-Teutonic people of eastern and southern Europe has occurred only in a few sporadic cases.

As to whether the mixture with other stocks has been an advantage or not the reader can judge from Table 33. This shows the number of reports of each kind of ancestry and the Field Worker's estimate of the persons thus reporting. The numbers here considered are, of course, too small to give any indication as to the general quality of the various nationalities.

On the whole the table suggests that thus far those who show an intermixture with other stocks do not stand quite so high as do those who are more completely of old New England stock. At any rate, 268 reports of intermixture with other stocks show an average level above that of those of pure English descent, while 494 show a lower level. The 233 persons who are listed as "not reporting" filled out questionnaires, but said nothing about ancestry. This was presumably because they had nothing except old English ancestry to report. Their rank in the table is close to the top.

Geographically the intermixture with other nationalities has been greatest in the newer parts of the country, least in the old regions of New England and the South. This is shown in Table 34 where the numbers indicate the reports of non-English ancestry among adult men and women per hundred persons reporting. It must not be supposed that 100 in the table means that everyone has non-English ancestry, for a person reporting ancestors of four nationalities is counted four times. The women, as a rule show more foreign ancestry than the men.

The distribution of non-English ancestry according to occupations and social level is more important than according to geographical location. It

TABLE 33

Racial inheritance

	PERSONS REPORTING	FIELD WORKER'S ESTIMATE
Dutch	62	3.44
Scotch Irish	44	3.23
Not reporting	233	3.11
Scotch	162	3.04
English	420	3.01
Welsh	31	2.97
All reporting	969	2.94
French	105	2.93
"American"	63	2.92
German	174	2.80
Irish	159	2.75
Scandinavian	25	2.60

TABLE 34

Foreign ancestry of Huntingtons (adult men and wives)

Reports of non-English ancestry per 100 persons

	BOTH SEXES	MEN	WOMEN
West North Central States	100	93	115
Pacific States	94	77	114
South Central States	90	92	87
Middle Atlantic States	86	72	106
Rocky Mountain States	84	85	83
East North Central States	83	77	90
Southern New England	60	58	46
South Atlantic States	53	46	64
Northern New England	51	59	44

is shown in Table 35 for men alone according to occupation and for both men and women according to the Field Worker's estimates. The occupations requiring the most intelligence are the ones where the foreign intermixture is least. In the table, to be sure, the clerical group is placed

TABLE 35

Foreign ancestry, occupations, and worker's estimates

OCCUPATIONS	NUMBER REPORTING	REPORTS OF FOREIGN ANCESTRY PER 100 PERSONS
Professions	104	64
Upper business	112	64
Clerical	70	80
Skilled labor	122	71
Farmers	85	84
Unskilled labor	36	117

WORKER'S ESTIMATE	A	B	C	D
	Men	Women	Men	Women
5 (highest)	41	31	66	97
4	97	83	73	100
3	216	184	71	87
2	137	116	78	75
1 (lowest)	35	29	100	124

TABLE 36

Foreign ancestry of Huntingtons by age groups (all including wives)

English is counted as foreign in distinction from American. Index numbers indicate reports of ancestry per 100 persons reporting.

AGE	PACIFIC	NEW ENGLAND	MIDDLE ATLANTIC	ALL OTHER STATES	ENTIRE COUNTRY
Over 70	72	39	100	51	64
60–69	94	61	92	90	85
50–59	118	63	100	95	95
40–49	139	90	91	100	101
30–39	108	94	104	129	113
20–29	151	102	135	127	123
10–19	207	150	157	189	176
Under 10	190	175	183	173	178

before the skilled laborers, but has a higher degree of non-English ancestry. It is not at all certain, however, that the clerical group has any greater intelligence than the skilled workers. But regardless of this, it is clear that the less competent parts of this particular group of people have intermarried with persons of other ancestry more than have the more intelligent. This does not appear to be continuing, however, as appears in the lower part of Table 35. There we see that when the men are grouped according to the Field Worker's estimate, there is a fairly steady increase in non-English ancestry from the most to the least successful. Among their wives, however, (column D) there is no such regularity. The men who rank 4 or 5 are more likely to marry women of non-English ancestry than are those of ranks 2 and 3. In rank 1, however, the wives are strongly tinctured with other racial origins. Here again the top and bottom are alike, but different from the middle. This is only a straw, but it may have some significance.

The last and in some ways the most interesting point in respect to foreign or non-English ancestry is its rapid increase. Table 36 has index numbers like those just used, but arranged according to ages in 1932. In each of four great sections of the country there is a fairly steady increase in foreign ancestry from decade to decade. The young children have two or three times as much as their grandparents. At this rate it looks as if the old Puritan type would rapidly disappear, or at least be converted into something else.

Appendix E

LIST OF AMERICAN HUNTINGTONS

Whose Names Appear in the Following Books of Reference

1. Lippincott's Universal Pronouncing Dictionary of Biography and Mythology, Philadelphia, 1930 (apparently not much revised since first publication in 1885).
2. L. B. Phillips: The Great Index of Biographical Reference, 2nd ed., Philadelphia, 1881.
3. A. M. Hyamson: A Dictionary of Universal Biography, London, 1916.
4. G. Vapareau: Dictionnaire Universel des Contemporains, Paris, 1893.
5. A. T. Camden Pratt: People of the Period, London, 1897.
6. W. S. Wallace: Dictionary of Canadian Biography, Toronto, 1926.
7. Harper's Encyclopedia of United States History, New York, 1901.
8. Dictionary of American Biography, New York, 1932.
9. Appleton's Cyclopedia of American Biography, New York, 1898–1931.
10. S. A. Allibone, Dictionary of English Literature, Philadelphia, 1858 and 1891.
11. National Cyclopedia of American Biography, New York, 1898–1928.
12. Who's Who in America, Chicago, 1901–1932.
13. Three general encyclopedias in the English language, viz:
 Encyclopedia Britannica, New York and London, 1929.
 International Encyclopedia, New York, 1914.
 Encyclopedia Americana, New York, 1932.
14. Six encyclopedias in foreign languages:
 Der Grosse Brockhaus, Leipzig, Germany, 1931.
 Encyclopedia Universal Illustrada, Madrid, Spain, 1925.
 Nordisk Familjebok, Stockholm, Sweden, 1929.
 Gyldendals Konversasjons Leksikon, Oslo, Norway, 1933.
 Svensk Uppslagsbok, Malmo, Sweden, 1932.
 Illustrowana Encyklopedja, Warsaw, Poland, 1928.
15. Latter Day Saints Biographical Dictionary.

16. J. H. Brown: Lamb's Biographical Dictionary of the United States, Boston, 1901.

The names are arranged chronologically, as indicated by the year of birth which follows each. Then come some index numbers in parenthesis indicating the complete line of descent from Simon, the original migrant to America, as given in the *Huntington Genealogical Memoir*, 1915. Simon is designated by the number 1, standing at the beginning. The second number indicates whether the person in question is descended from the first, second, third, or later child of Simon, and so on. Thus 1.3.4 means the fourth child of the third child of Simon. The degree to which the numbers in parenthesis are alike indicates the relationship of any two individuals. The persons designated by letters are not known to be descended from the Puritan Huntingtons of New England. After each name comes a brief statement of the work of each person and of his relationship to others in the list. At the end there is an indication of the publications in which each name is listed. Two other names, which may belong to American Huntingtons are mentioned in No. 10 above, namely J. F. Huntington who wrote a Manual of Fine Arts, published in New York in 1854, and Henry G. Huntington who wrote Florentine Notes, London, 1884. As nothing further is known of these, they are omitted.

The list of American Huntingtons follows:

1. JABEZ, 1719, (1.3.3.4.1) Business man in West India trade. Made one of the largest fortunes of his day. Revolutionary patriot. Major General of Connecticut militia. Father of four sons mentioned in this list (Nos. 5, 6, 7, 8), grandfather of three (Nos. 13, 14, 15), great grandfather of two (Nos. 24, 29), great-great grandfather of one (No. 48), and great-great-great grandfather of two (Nos. 56, 57). Mentioned in 3, 8, 9.
2. SAMUEL, 1731, (1.3.4.2.4) Lawyer, governor, signer of the Declaration of Independence, and president of the Continental Congress. Brother of No. 3, uncle of No. 9. Mentioned in 1, 3, 8, 9, 11, 13, 16.
3. JOSEPH, 1735, (1.3.4.2.6) Liberal Congregational clergyman who rejected the common doctrine of future punishment, and was really a Universalist. Brother of No. 2 and father of No. 9. Mentioned in 2, 3, 9, 10.
4. BENJAMIN, 1736, (1.3.9.6) Lawyer. Member of Continental Congress and of first Congress of the United States. Mayor of Norwich, judge of superior court. Father of No. 10, and grandfather of Nos. 19 and 20. Mentioned in 3, 7, 9, 11, 16.

5. JEDEDIAH, 1743, (1.3.3.4.1.1) Merchant in West India trade with his father, No. 1. Brigadier General in Revolutionary Army, and Major General by brevet. Son of No. 1, brother of Nos. 6, 7, 8; father of Nos. 13, 15; uncle of 14, grandfather of Nos. 28 and 29. Mentioned in 3, 7, 8, 9, 11, 16.
6. ANDREW, 1745, (1.3.3.4.1.2) Merchant, paper manufacturer, and judge of probate. Commissary of brigade in Revolutionary Army. Son of No. 1, brother of Nos. 5, 7, 8; uncle of Nos. 13, 14, 15. Mentioned in 3, 9.
7. JOSHUA, 1751, (1.3.3.4.1.3) Merchant in West India trade with his father, No. 1. Lieutenant Colonel in Revolutionary Army and later Brigadier General. Member of Congress. Son of No. 1; brother of Nos. 5, 6, 8; uncle of Nos. 13, 14, 15. Mentioned in 3, 9.
8. EBENEZER, 1754, (1.3.3.4.1.5) Merchant with his father, No. 1. Lieutenant Colonel in Revolutionary Army and later Brigadier General. Member of Congress, 1807–1809 and 1815–1817. Son of No. 1; brother of Nos. 5, 6, 7; uncle of Nos. 13, 14, 15. Mentioned in 3, 7, 9, 16.
9. SAMUEL, 1765, (1.3.4.2.6.1) Lawyer, lieutenant colonel of militia, chief judge of supreme court, and governor of Ohio. Son of No. 3; nephew of No. 2. Mentioned in 3, 7, 8, 9, 11, 16.
10. BENJAMIN, 1777, (1.3.9.6.6) Exchange broker. Married a daughter of No. 5. He himself was a son of No. 4, and father of Nos. 19 and 20. His two sons, descended on both sides from men in this list, are in many ways the two most distinguished Huntingtons. Mentioned in 9.
11. ABEL, 1777, (1.2.4.10.4.6) Physician and Representative in Congress, 1833–1837. Grandfather of No. 38; uncle of No. 18. Mentioned in 11, 16.
12. WILLIAM, 1784 (1.2.6.3.1.7.1) Mormon leader and pioneer. Mentioned in 15.
13. JOSHUA, 1786, (1.3.3.4.1.1.6) Congregational clergyman. Son of No. 5, and grandson of No. 1; brother of No. 15; nephew of Nos. 6, 7, 8. Married Susan Mansfield, author of poetry, letters, and books for children. Mentioned in 2, 3, 9, 10, 16.
14. JABEZ, W., 1788, (1.3.3.4.2.8.1) Lawyer. Member of Congress, 1829–1835. Senator, 1839–1849, judge. Grandson of No. 1; nephew of Nos. 5, 6, 7, 8. Mentioned in 3, 9, 11, 16.
15. DANIEL, 1788, (1.3.3.4.1.1.7) Congregational clergyman, author of poems and tracts. Son of No. 5, grandson of No. 1, brother of No. 13, nephew of Nos. 6, 7, 8. Mentioned in 3, 9.

16. Elisha, 1796, (1.2.4.2.7.5.3) Physician, mayor of Lowell, Mass., lieutenant governor of Massachusetts. Father of No. 30, grandfather of No. 41. Mentioned in 3, 8, 9.
17. Elisha Mills, 1806, (1.3.4.2.7.1.9) Lawyer, federal judge. Mentioned in 3, 9, 16.
18. Ezra Abel, 1813, (1.2.4.10.4.7.2) Clergyman and professor. Nephew of No. 11. Mentioned in 10, 16.
19. Jedediah V., 1815, (1.3.9.6.6.1) Episcopal clergyman who became a Roman Catholic priest. Author of poems and novels, lecturer. Son of No. 10, grandson of both Nos. 4 and 5, brother of No. 20. One of the most eminent Huntingtons, and more fully of Huntington descent than any person in this list except his brother. Mentioned in 1, 2, 3, 4, 7, 8, 9, 10, 11, 13, 16.
20. Daniel, 1816, (1.3.9.6.6.2) One of the best American portrait painters. Probably the best known of the Huntingtons, and more fully of Huntington descent than any person in this list except his brother. Son of No. 10, grandson of both Nos. 4 and 5, brother of No. 19. He is the crowning product of two of the most distinguished strains among the Huntingtons. Mentioned in 1, 2, 3, 7, 8, 9, 11, 12, 13, 14, 16.
21. Elijah Baldwin, 1816, (1.2.4.3.10.8.2) Clergyman and genealogist. Mentioned in 10.
22. Adoniram J., 1818, (1.2.5.1.5.2.10) Professor of Greek and Latin, and also clergyman. Mentioned in 12, 16.
23. Frederick Dan, 1819, (1.3.6.2.6.8.11) Unitarian minister and professor at Harvard University. Entered Episcopal church and became Bishop of New York. Editor of religious journals, author of books and sermons. One of the best known Huntingtons. Father of Nos. 34 and 39, and grandfather of No. 56. Mentioned in 4, 5, 8, 9, 10, 11, 12, 13, 14, 16.
24. William Henry, 1820, (1.3.3.4.1.2.4.8) Journalist, lived in Paris 20 years as correspondent of the New York *Tribune*. Was art collector and philanthropist. Mentioned in 3, 9, 16.
25. Collis P., 1821, (1.3.6.7.5.2.6) Railroad builder. Began as a small merchant, later built Central Pacific Railroad, Southern Pacific, and finished Chesapeake and Ohio. One of the founders of Pacific Mail Steamship Co., founder of Newport News, Va., and Huntington, W. Va. Probably ranks close to Daniel, the artist, No. 20, as the best known Huntington. Uncle of No. 37. Mentioned in 7, 8, 9, 11, 12, 13, 16.

26. Lucius Seth, 1827, (1.2.5.1.5.4.1.1) Lawyer, newspaper owner, member of Canadian Parliament, Solicitor General, President of Privy Council, and Postmaster General. The only Canadian in this list of eminent Huntingtons. Sometimes said to be descended from a loyalist ancestor who went to Canada because of the Revolution, but his great grandfather did not go from Vermont to Canada until after 1790. Mentioned in 3, 6, 9, 10, 13.

27. Dewitt Clinton, 1831, (1.2.5.4.2.10.8) Methodist clergyman, who at the age of 67 became Chancellor of Nebraska Wesleyan University. Mentioned in 12, 16.

a. John, 1832, (of English origin) Came to Philadelphia at early age. Inventor and capitalist. Mentioned in 11.

28. Emily (Mrs. John C. Miller), 1833, (1.3.3.4.1.1.8.7) Author and educator. Sister of No. 29. Mentioned in 10, 11, 12, 16.

29. George, 1835, (1.3.3.4.1.1.8.8) Clergyman who devoted most of his life to teaching rhetoric, logic, and Biblical literature. As his second wife, in 1914, he married Margaret Evans, Dean of Women at Carleton College and a prominent educator. Brother of No. 28. Mentioned in 10, 12.

30. William Reed, 1838, (1.2.4.2.7.5.3.5) Episcopal clergyman, author of many books on religious topics, great advocate of church unity. Mentioned in 8, 9, 10, 11, 12, 13, 14, 16.

31. Henry A., 1840, (1.2.4.5.8.4.5.3) Journalist, Major in Union Army during Civil War. Writer of special features in newspapers. Lived much abroad. Mentioned in 12.

32. Emily, 1841, (1.3.6.2.6.6.7) Author and educator. Founder and for 20 years head of the Wilson Industrial School for Girls in New York, the first institution of its kind in America and perhaps in the world. Wrote books on gardening, cooking, and housekeeping. Mentioned in 10, 12.

33. William E., 1844, (1.3.6.2.6.8.3.3) Methodist clergyman, but spent most of his life as dean and president of Boston University. Lieutenant in Civil War. Nephew of No. 23, cousin of Nos. 34, 39. Mentioned in 8, 11, 12, 13.

34. Arria Sargent, 1848, (1.3.6.2.6.8.11.2) Author of many books, one of the most notable of which is "Under a Colonial Rooftree." Daughter of No. 23, sister of No. 39, cousin of No. 33, and aunt of No. 56. Mentioned in 12.

35. Frank, 1848, (1.2.4.5.8.1.8.4) Author and editor. Mentioned in 12.

36. Thomas Waterman, 1849, (1.3.4.2.5.11.5.3) Physician, chief surgeon Western Pacific Company, and professor of surgery in the University of California. Mentioned in 10, 12.
37. Henry Edwards, 1850, (1.3.6.7.6.2.2.4) Railroad builder and art collector. Associated with his uncle, No. 25, in development of Southern Pacific and other railroads, owner of street railways and other public utilities in Los Angeles, inherited part of his uncle's wealth and founded the Huntington Library with its collections and opportunities for historical research in Los Angeles. This man, with his uncle and his uncle's adopted son, No. c., form a conspicuous family group. Mentioned in 8, 11, 12, 13.
38. George, 1850, (1.2.4.10.4.6.4.4) Physician, distinguished for his work on the peculiar hereditary disease known as Huntington's chorea. Grandson of a physician who was also a member of Congress, No. 11. Son of a physician who coöperated in the study of chorea. Mentioned in 14.
39. James Otis Sargent, 1854, (1.3.6.2.6.8.11.4) Episcopal clergyman, founder of the Order of the Holy Cross, conductor of missions, social worker and reformer. Son of No. 23, brother of No. 34, uncle of No. 56, and cousin of No. 33. This man, like No. 20, represents a group of closely related distinguished persons. Mentioned in 12.
40. Clarence William, 1857, (1.1.1.7.1.1.2.8.4.1) Railroad operator, general superintendent of Central Railway of New Jersey, and later Vice President and General Manager of the Minneapolis and St. Louis railroad. Father of No. 60. Mentioned in 12.
41. Oliver Whipple, 1858, (1.2.4.2.7.5.3.1.4) Educator. Schoolmaster in Providence. Mentioned in 12.
42. George Sumner, 1861, (1.2.6.3.1.8.5.3) Physician, and student of anatomy, professor, and editor. Mentioned in 11, 12.
43. Harwood, 1861, (1.3.4.2.8.1.4.2.3) Chemist, lawyer, minister, and author. Practised law with special reference to chemical problems, but later entered the Episcopal ministry. Mentioned in 10, 12.
44. Agnes, 1863, (1.3.10.3.9.7.1) Singer who made quite a reputation in New York. Mentioned in 5, 11.
45. Robert Watkinson, 1866, (1.2.6.3.1.8.4.3.1) President of life insurance company. Several other Huntingtons have been prominent in this business. Brother of No. 46. Mentioned in 12.

45A*. James Coleman Ford, 1867 (1.3.4.2.7.1.9.1.1). Corporation official. Grandson of no. 17. Mentioned in 12.

46. Daniel Trumbull, 1868, (1.2.6.3.1.8.4.3.2) Missionary bishop of the Episcopal church in China. Translator of books from English into Chinese. Brother of No. 45. Mentioned in 12.

47. Susan Dickinson, 1869, (1.3.3.4.1.2.4.7.4) Educator and missionary. President of American College for Women, in Madrid, Spain. Mentioned in 12.

c. Archer Milton, 1870, (adopted son of Collis Potter Huntington, No. 25) Author, specialist in Spanish history, founder of American Hispanic Society, and chief benefactor of American Geographical Society. Mentioned in 11, 12, 13, 14.

48. David Lynde, 1870, (1.3.6.2.4.4.3.1.1) Electrical engineer. Manager Washington Water Power Company. Mentioned in 12.

49. Charles Pratt, 1871, (1.3.6.2.6.8.1.6.1) Architect. Has lived in Paris, New York, and Washington. Mentioned in 12.

d. Charles Clifford, 1872, (A5.1.1.1.1) Geographer, professor, and author. Studied medicine, became an economist and then a geographer. Mentioned in 12.

50. Theodore Sollace, 1873, (1.2.4.3.11.2.1.4.4) Banker of Columbus, Ohio. Mentioned in 12.

51. Edward Vemilye, 1874, (1.2.4.10.4.7.2.3.1) Mathematician, professor at Harvard University, author of mathematical treatises. Mentioned in 12.

52. Warner Dare, 1874, (1.2.6.3.1.6.6.7.1) Manufacturing chemist. Mentioned in 12.

53. Ellsworth, 1876, (1.3.3.4.1.2.2.5.3.3) Explorer, geographer, professor, author. Probably the most widely travelled and most prolific writer among the Huntingtons. Mentioned in 11, 12, 13, 14. Brother of No. 54.

54. George Herbert, 1878, (1.3.3.4.1.2.1.5.3.4) Congregational clergyman and educator. Has spent most of his life teaching at Robert College in Turkey. Brother of No. 53. Mentioned in 12.

55. Albert Tracy, 1878, (1.3.3.3.2.6.7.5) Educator and librarian. Mentioned in 12.

56. James Lincoln, 1880, (1.3.6.2.6.8.11.1.4) Physician, specialist in

* Now known as Ford Huntington. Accidentally omitted in the tabulations of Chapter VI (except Table XXI) because of this change of name.

gynecology. Grandson of No. 23 and nephew of Nos. 34 and 39. Mentioned in 11, 12.

57. William Henry, 1883, (1.3.3.4.1.2.4.6.3.4) Physician, ear, nose, and throat specialist. Mentioned in 13.

58. William Chapin, 1884, (1.1.1.7.1.1.2.8.4.1.1) Industrial engineer. Son of No. 40. Mentioned in 12.

59. Whitney Clark, 1887, (1.3.10.2.3.5.8.2.3) Professor of civil engineering. Mentioned in 12.

Appendix F

I. ORIGINAL LETTER SENT TO PERSONS OF HUNTINGTON DESCENT

Dear Mr. Huntington:

The Huntington Family Association is gathering data as to all the Huntingtons in America. Won't you help by giving the information asked for below and returning this letter to me in the enclosed stamped envelope.

In ten minutes you can answer the questions, have the letter sealed and ready to mail. Thousands of Huntingtons all over the country are giving this information. I shall expect to hear from you, too, in a few days. Your coöperation will be greatly appreciated.

If you can help us to gather this information we will let you know what we find out about where the Huntingtons live, how many there are, what they do, how many children they have, and so forth.

Just ten minutes—*now.*

Yours sincerely,

Where were you born?.....How old are you?.....
What color are your eyes?.....Hair?.....Complexion?.....
What is your occupation?.....
Did you finish Grammar School?.....High School?.....College?.....
What is your denomination?.....Are you a church member?.....
Are you descended from the Connecticut Huntingtons?.....
What nationalities besides English have there been among your ancestors?..
.....
Have you a telephone?.....Do you own your home?.....
How long have you lived in your present locality?.....
Do you own an automobile?.....What kind?.....What year?.....
Are you married?.....When were you married?.....
Where was your husband or wife born?.....
How old is he or she?.....
What is the nationality of his or her parents?.....
How many children have you ever had? Boys.....Girls.....

How many are living? Boys.....Girls.....
Will you please give the names of your children?

Name.....Age.....Address.....
Name.....Age.....Address.....
Name.....Age.....Address.....
Name.....Age.....Address.....
Name.....Age.....Address.....

Will you give here your correct address?.....
.....

Any further information about yourself, your ancestors, your work or your relatives in the Huntington family that you care to add will be of great value and will be greatly appreciated.....
.....
.....
.....

II. FOLLOW-UP LETTER

Some time ago we sent you some blanks for information about the Huntington family. I have not heard from you but I know how hard it is to attend to such things.

We want to be sure that your blank is added to the hundreds that have been filled in and returned. Won't you fill yours in and send it right away?

If you have misplaced the blanks please give the information asked for below and return this paper to me in the enclosed stamped envelope.

You can answer the questions, have the letter sealed and ready to mail in ten minutes. Your coöperation will be greatly appreciated.

Yours sincerely,

Appendix G

ORIGINAL DATA AS TO NINETEEN FAMILY NAMES

Table 37 presents the main facts as to the number of persons bearing various names in the United States, and as to their occupational status and evidences of merit or demerit. Sections A, B, and C show the number of entries of each name in the directories of the following cities:

A. New York, Chicago, Philadelphia, Boston, Detroit, Cleveland, St. Louis, Baltimore, Washington, Cincinnati, Indianapolis, Louisville, Toledo, and Nashville.

B. New York, Chicago, Philadelphia, Boston, Detroit, Cleveland, St. Louis and Washington.

C. New York, Chicago, Cleveland, St. Louis, Baltimore, Louisville, and Toledo.

Section D gives the number of persons of each name in the United States Army during the World War as estimated by the Adjutant General's Office on the basis of one of its many files. If this list were complete, it would give a close approximation to the proportional numbers of persons bearing each name in the country as a whole in 1917, provided all names are alike as to the following points:

1. The percentage of the men drafted as soldiers who were rejected for physical or other inadequacy.
2. The percentage who were not yet naturalized and were therefore reckoned as aliens.
3. The percentage who were commissioned officers.
4. The percentage who escaped service in the United States Army through misrepresentation, fraud, previous enlistment in other armies and various other minor methods.
5. The size of families.

In spite of the absence of data as to all five of these points, the Army estimates are of value as a check on the data derived from directories. The following figures show the proportion by which the number of persons bearing each name in the directories of 14 cities (column A) exceeds the

number bearing the same name in the Army (column D). Army data are not available as to the other names.

Adams	1.3
Williams	1.3
Stone	1.7
Brown	1.7
Larson	2.2
Wagner	2.6
O'Brien	3.5
Schwartz	6.7
Cohen	13.1
Levine	16.8

The names Adams and Williams stand together, and apparently represent the average conditions among the people whose ancestors have been in this country for several generations. Accordingly, in column E the population index for these names, as well as for Edwards and the six distinctively colonial names, is given as 17.3. This is based on the assumption that persons bearing these names are distributed over the country in the same way as are the Huntingtons. In other words the 14 cities are assumed to contain 15.7 per cent of them as well as 15.7 per cent of the country's total population; and the size of families, numbers of aliases, etc. are supposed to be uniform for all of these names. The relatively exact data for the Huntingtons show that for every entry of this name in the directories of the 14 cities there are approximately 17.3 persons of all ages in the country as a whole. Thus the population index is the number by which the directory record of column A must be multiplied to give the total population bearing each name in the entire country (column F).

The Army data show that the other names depart from this figure—only a little in the case of Brown and Stone, but very greatly in that of Cohen and Levine. This indicates that these other names are relatively more numerous in the directories than in the Army. This must be due either to the causes mentioned above, especially the presence of immigrants who are not yet naturalized, or else to the fact that these names are concentrated in the eastern cities. We know that such concentration occurs to a large degree among the persons bearing the foreign names; we also know that among these same persons a great many have not been naturalized.

A means of ascertaining approximately how much weight to give to these factors is possible in the case of the names Cohen and Levine. It is

number bearing the same name in the Army (column D). Army data are not available as to the other names.

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Stone	1.7
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TABLE 37—ORIGINAL DATA AS TO NINETEEN FAMILY NAMES

	POPULATION						OCCUPATIONS—CHAPTER II												MEASURES OF MERIT—CHAPTER III																MEASURES OF DEMERIT—CHAPTER IV											
	A	B	C	D	E	F	G		H		I		K		L		M		N		O		P		Q		R		S		T		U		V		W		X	Y		Z				
	Names in directories			Army estimates	Population index	Estimated total in United States	Authors		Scientists		Doctors		Lawyers		Government officials		Dentists		Patentees		Business		Encyclopedia		Notable Americans		Library cards		Who's Who		Social Register		American Association for the Advancement of Science		Directors		Directorates		Dun and Bradstreet's ratings	Social service lists		7 cities, 3 states		7 cities		
	14 cities	8 cities	7 cities				I	II	I	II	I	II	I	II	I	II	I	II	I	II-A	I	II	I	II	I	II-B	I	II	I	II-C	I	II	I	II	I	II-D	I	II-E	I	II-F	I	II-G	I	II-H		
Coolidge	189	187	99	—	17.3	3,270	8	1,020	6	765	12	1,550	9	1,148	1	128	3	383	6	165	3	15.9	2	255	5	637	569	725	18	2,295	48	256.5	3	383	10	1,275	39	3.90	7	4.14	131	169	99	126	27	27.3
Hooker	311	272	—	—	17.3	5,380	3	232	8	619	21	1,675	1	77	2	155	5	387	8	25.7	2	154	11	850	1,050	812	9	696	14	51.5	9	696	9	696	17	1.89	25	3.18	—	—	—	—	—	—		
Huntington	312	288	199	—	17.3	5,400	5	385	3	231	15	1,156	2	154	2	154	8	616	12	925	8	22.4	5	385	18	1,386	1,456	1,122	21	1,619	25	86.8	7	538	19	1,462	56	2.95	40	3.86	140	108	92	71	43	21.6
Lyman	673	624	502	—	17.3	11,620	5	179	6	215	22	789	11	394	2	72	8	287	12	430	12	17.8	0	0	14	502	721	258	19	681	33	52.9	12	430	16	573	59	3.78	36	3.94	297	106	324	116	109	21.7
Trumbull	173	151	—	—	17.3	3,000	1	139	2	278	4	556	3	417	1	139	0	0	7	972	9	52.0	3	417	10	1,390	927	1,288	3	417	5	28.9	4	556	6	834	35	5.83	29	2.81	—	—	—	—	—	—
Van Dyke	388	339	—	—	17.3	6,720	5	310	3	186	17	1,052	3	186	2	124	4	248	1	62	11	28.3	1	62	7	435	695	432	8	496	12	35.4	3	186	9	558	18	2.00	25	4.24	—	—	—	—	—	—
Total or average.	*2,046*	*1,861*	*800*	—	—	*35,390*	*27*	*318*	*28*	*330*	*91*	*1,072*	*29*	*342*	*10*	*118*	*28*	*330*	*43*	*492*	*51*	*24.9*	*13*	*118*	*65*	*589*	*5,418*	*638*	*78*	*920*	*137*	*73.5*	*38*	*448*	*69*	*813*	*224*	*3.25*	*162*	*3.66*	*568*	*115*	*515*	*104*	*179*	*22.4*
Adams	10,945	10,296	12,616	8,250	17.3	189,000	39	86	41	90	279	614	64	141	49	108	130	286	107	236	277	25.8	21	46	47	103	7,459	164	112	244	138	13.4	40	88	145	319	443	3.08	277	3.76	10,203	225	6,792	148	4,454	35.3
Brown	48,024	42,367	32,469	26,750	15.9	761,000	71	39	125	68	907	496	215	118	120	66	391	214	499	274	983	20.4	7	4	83	45	10,364	57	222	122	334	7.9	108	59	398	218	936	2.36	983	3.89	46,003	253	27,959	152	19,003	58.5
Edwards	7,526	6,158	4,857	—	17.3	130,000	15	48	24	77	176	565	30	96	27	87	62	199	79	253	141	18.7	1	3	31	99	3,349	107	49	157	55	9.0	23	73	74	237	219	2.96	141	3.75	7,215	227	4,847	155	3,474	71.4
Stone	5,750	5,020	—	3,250	15.9	91,000	8	37	23	105	168	770	57	261	25	114	74	338	69	316	209	36.3	2	9	24	110	1,960	90	54	247	84	16.7	34	155	81	370	234	2.89	209	3.91	—	—	—	—	—	—
Williams	35,255	26,980	23,424	26,500	17.3	610,000	41	28	74	50	616	420	118	81	91	62	279	190	387	264	463	13.3	1	0.7	34	23	9,248	63	185	126	252	9.4	79	54	300	205	798	2.66	463	3.93	40,297	275	22,926	157	16,331	69.6
Total or average.	*107,500*	*90,821*	*73,366*	—	—	*1,781,000*	*174*	*41*	*287*	*67*	*2,146*	*503*	*484*	*113*	*312*	*74*	*936*	*219*	*1,141*	*268*	*2,073*	*19.2*	*32*	*7*	*219*	*51*	*32,310*	*76*	*622*	*146*	*863*	*9.5*	*284*	*67*	*998*	*232*	*2,630*	*2.64*	*2,073*	*3.87*	*103,718*	*255*	*62,524*	*154*	*43,262*	*59.1*
Cohen	32,771	31,525	28,508	2,500	4.9	162,000	9	23	19	49	154	398	201	518	5	13	108	279	39	101	1,978	58.6	4 (3)*	10	0	0	1,231	32	14	36	4	0.1	14	36	41	106	107	2.71	1,979	4.08	15,407	396	10,299	265	7,572	26.6
Flood	1,570	1,372	—	—	11.5	18,000	1	23	1	23	13	301	6	139	1	23	11	254	4	93	13	8.3	1 (1)	23	2	46	95	22	2	46	10	7.3	0	0	5	116	13	2.60	37	3.89	—	—	—	—	—	—
Larsen	7,158	7,011	6,406	3,250	14.4	103,000	3	12	20	81	68	276	7	28	15	61	31	125	84	340	123	17.2	0	0	1	4	511	21	9	36	1	0.1	12	49	22	89	89	1.96	123	4.15	2,899	117	4,189	169	3,360	52.4
Levine	12,620	11,037	—	750	4.0	51,000	2	16	13	106	79	644	58	473	0	0	33	268	6	49	651	51.2	0	0	0	0	140	11	5	41	0	0	13	106	13	106	106	1.54	651	4.16	—	—	—	—	—	—
O'Brien	13,244	12,300	9,567	3,750	11.7	155,000	7	19	5	13	136	366	80	215	17	46	56	151	60	161	161	12.2	0	0	2	5	842	23	31	83	20	1.6	8	21	53	143	143	2.92	161	3.92	8,894	239	11,399	306	6,548	68.4
Russo	4,425	4,340	3,936	—	5.8	25,000	0	0	0	0	0	0	4	67	0	0	1	17	4	67	127	28.7	0	0	0	0	86	14	0	0	0	0	0	0	0	0	0	0	127	4.06	3,767	627	3,444	574	2,246	45.5
Schwartz	13,420	11,713	—	2,000	8.2	110,000	0	0	13	49	121	459	92	348	9	104	104	394	34	129	1,048	77.7	2 (2)*	8	0	0	862	33	5	19	11	0.9	8	30	36	136	136	1.56	1,048	4.02	—	—	—	—	—	—
Wagner	10,359	8,693	7,864	4,000	13.7	142,000	4	12	12	35	84	245	32	94	6	46	46	134	123	361	311	30.0	2 (2)*	6	2	6	2,941	81	15	44	16	1.8	8	23	58	169	169	1.61	311	3.78	4,369	128	3,504	105	2,768	35.2
Total or average.	*95,567*	*87,990*	*56,281*	—	—	*864,000*	*26*	*13*	*83*	*40*	*655*	*315*	*480*	*231*	*53*	*26*	*390*	*188*	*354*	*171*	*4,412*	*46.2*	*9*	*4*	*7*	*3*	*6,708*	*32*	*81*	*39*	*62*	*9.7*	*63*	*30*	*228*	*110*	*487*	*2.14*	*4,437*	*4.02*	*35,336*	*233*	*32,835*	*250*	*22,494*	*40.0*

* Numbers in parenthesis indicate Europeans.

well known that the overwhelming majority of people bearing these names are Jews. According to the census of 1920 the Jews in the 14 cities of column A comprised 69 per cent of all the Jews in the country. We may safely assume that the Cohens and Levines in those cities form approximately this same percentage of all the persons bearing these names in the country as a whole. If this is so, the Army data and the directory data become harmonious if we multiply the directory numbers by 4.0 in the case of Levine and 4.9 in that of Cohen. In other words, we assume that the small number of Cohens in the Army compared with the directories is due partly to the presence of many aliens bearing these names, partly to great concentration in the 14 cities, and to a small extent to the other causes mentioned above. For the other names we assume that the population index should fall between the limits of 17.3 and 4.0 in proportion to the degree to which the ratio between the directories and the Army as given in the little table above departs from the ratio (1.3) for Adams and Williams. For the names Flood and Russo, which are not in the Army list, the population index has been arbitrarily estimated on the basis of our general knowledge of the quality of the name.

Section F shows in round numbers the estimated total number of persons bearing each name in the United States as a whole on the basis of the number of persons in 14 city directories (section A) and of the population index which has just been described (section D).

Sections G to O of the table show occupations. Under each letter column I indicates the actual number of persons listed in the reference books named in Chapter II, page 29, while except in section O, column II shows the number per 100,000 adult men aged 25 years or more in the United States as a whole. The number of such men is estimated from column F, the assumption being that under each name they form the same percentage (24) as do similar men among native whites in the United States as a whole. This assumption gives an advantage to recently arrived groups among whom the number of men is high. In the case of business (section O) the numbers in column II-A show the number of persons of each name in the 14 cities of section A for each 1000 entries of the name in the directories of those cities.

Sections P to X indicate measures of merit. Here, too, the headings I and II carry the same implication as under occupations, but under Library Cards (R) the column headed II-B indicates cards per thousand instead of per 100,000 men. Under the Social Register (S) the column headed II-C indicates names in the Register per 1000 names in the directories of 8

cities (column B). Under directorates (W), column I shows the total number of directorates and column II-D the directorates per person. Under Dun and Bradstreet's Ratings (X), column I gives the number of persons in the 14 cities of A plus the states of California, Connecticut, Massachusetts, New York, Ohio, and Vermont, while II-E shows the average rating.

Divisions Y and Z comprise measures of demerit. In Y the data are based on the 14 cities of Section A. Column I shows the names on the Social Service Exchange lists, and II-F the number of such names per 1000 (instead of 100,000) adult men aged 25 years or more in the entire United States. Finally Section Z gives first the number of criminals on the lists of Bureaus of Criminal Investigation in the 7 cities of Section C and the three states of Indiana, Massachusetts, and Michigan, and then (II-G) the number of such names per 1000 adult men of the same name aged 25 years or more in the United States as a whole. The second part under Z shows in column I the criminals in the lists of the 7 cities alone, and in column II-H the number of such criminals per *100* persons of the same name in the directories of the same cities, as given in column C. Chapter IV explains why this column is less reliable than II-G.

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